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HUMAN RESOURCES AND THE RESPONSE TO HIV IN VIETNAM: POLICIES AND HEALTH WORKERS' PERSPECTIVES

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ABSTRACT

Background: An effective response to HIV requires sound national policies, a strong and sustainable health system with a motivated and well-trained health workforce.

Aim and objectives: To analyse development of HIV-related policy and describe health workers' perception and experiences on the HIV response in Vietnam. This thesis has four objectives: i) To analyse development of HIV-related policy in regards to policy content, policy-making process, actors and obstacles to policy implementation; ii) To describe health workers' perceptions and experiences about HIV work and explore factors that influence their job satisfaction; iii) to explore HIV-related stigma impacts upon health workers; and iv) To describe health workers' knowledge about HIV.

Method: Nine policy documents on HIV were analysed and 17 key informant interviews were conducted in Ha Noi and Quang Ninh (Study I). Seven focus group discussions and 15 semi-structured interviews with health workers, purposively selected from national and provincial organisations responsible for HIV response in five provinces (Study II). Fourteen semi-structured interviews with health workers, purposively selected from hospitals and detention centres for drug users and sex workers in Hanoi (Study III). Interviews with structured questionnaires and self-administered questionnaires on HIV knowledge were carried out with 610 health workers in three provinces in Vietnam (Study IV).

Results: Vietnam's HIV policy has evolved from punitive control measures to a more rights-based approach, encompassing harm reduction and payment of health insurance for medical costs of people living with HIV (PLHIV) (Paper I).

HIV work is perceived by Vietnamese health workers as having both positive and negative aspects. Factors related to job satisfaction included training opportunities, social recognition, and meaningful tasks. Factors related to job dissatisfaction included unsatisfactory compensation, lack of positive feedback from supervisors, work-related stress, fear of infection, and stigma because of association with PLHIV (Paper II).

Stigma experienced by health workers may be organised around several themes i) Little social prestige associated with HIV work; ii) Fear expressed by family members; iii) Feelings of being devalued in the healthcare field; and iv) Work-related stress and burnout (Paper III).

Health workers' knowledge about HIV epidemiology, prevention and treatment appeared to be adequate. Knowledge about stigma and discrimination, palliative and nutrition care remained modest. The multivariable linear regression analysis showed that health workers, who do not support isolation and separation of PLHIV and who have a positive attitude to PLHIV, have better knowledge about stigma and discrimination (Paper IV).

Conclusion: Vietnam's HIV-related policy has converged towards internationally recognised approaches. Policies of harm reduction and health insurance for HIV patients' medical costs are now the norm. Stigma is still a major barrier to HIV response. Efforts are needed to change the public image of HIV work, scale up stigma reduction, enhance stress management and improve workplace safety, thereby making health workers feel that their work is both valued and safe.

Keywords: Health policy analysis, job satisfaction, stigma, discrimination, knowledge.

LIST OF PUBLICATIONS

I. Pham Nguyen H, Pharris A, Nguyen Thanh H, Nguyen Thi Kim C, Brugha R, Thorson A. *The evolution of HIV policy in Vietnam: from punitive control measures to a more right-based approach.* Global Health Action 2010, 3: 4625-DOI: 10.3402/gha.v3i0.4625

II. Pham Nguyen H, Protsiv M, Larsson M, Ho Thi H, H. de Vries D, Thorson E A. *Stigma, an important source of dissatisfaction of health workers in HIV response in Vietnam: A qualitative study.* BMC Health Services Research 2012, **12**:474.

III. Pham Nguyen H, Nguyen Thi Kim C, Ho Thi H, Larsson M, Pharris A. *HIV-related stigma: Impacts on health workers in Vietnam.* (In Press in Global Public Health; Accepted on 25/9/2012)

IV. Pham Nguyen H, Nguyen Van H, Le Minh G, Nguyen To N, Hoang Van M, Thorson E A. *Knowledge about HIV, among health workers in three provinces in Northern Vietnam: A cross-sectional study.* (Submitted)

The papers will be referred to by their Roman numerals.

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LIST OF ABBREVIATIONS

05 Centre	Compulsory detention centre for female sex workers
06 Centre	Compulsory detention centre for drug users
09 Hospital	Hospital for AIDS patients
AIDS	Acquired Immune Deficiency Syndrome
ART	Antiretroviral therapy
ARV	Antiretroviral
CDC	Centers for Disease Control, USA
FGD	Focus group discussion
FHI	Family Health International
FSW	Female sex worker
HAF	Human resources for health action framework
HIV	Human immunodeficiency virus
HRH	Human resource for health
IDU	Injecting drug user
ILO	International Labour Organization
JSS	Job satisfaction survey
MOH	Ministry of Health
MOLISA	Ministry of Labour, Invalids and Social Affairs
MMT	Methadone maintenance therapy
MSM	Men who have sex with men
PAC	Provincial HIV/AIDS Control Centre
PEPFAR	US President's Emergency Plan for AIDS Relief
PLHIV	People living with HIV
S&D	Stigma and discrimination
TB	Tuberculosis
UN	United Nations
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNGASS	United Nations General Assembly Special Session on HIV and AIDS
UNICEF	United Nations Children's Fund
UNDOC	United Nations Organization for Drugs and Crime
USAID	United States Agency for International Development
VAAC	Vietnam Administration for HIV/AIDS Control
WB	The World Bank
WHO	World Health Organization

PREFACE

In my former work as the programme officer for the Embassy of Sweden in Ha Noi, Vietnam, I often met with researchers and PhD students from the Vietnam-Sweden Research Cooperation. When listening to their presentations at meetings or seminars, I was very impressed with the purity and clarity in their presentations, which are very different to the abstract presentations of many monitoring and evaluation consultants. Consequently, I wished I could present issues as clearly, simply and succinctly as these researchers.

Furthermore, in my work with the Vietnam-Sweden Health Cooperation, I often read reports from the Vietnam Ministry of Health and from international organisations about the situation of the health sector in Vietnam. I noticed a recurring theme about the limited quantity and poor quality of the health workforce being the main problem in the health sector. Therefore, the solutions were to increase the number of health staff, provide more training and increase salaries and allowances. But the problem still persisted in subsequent reports. Then a question appeared in my mind, why is this problem so resistant? Does increasing staff numbers and training solve the problem? And one overall question in my thinking was: Do health workers – especially those working in HIV services – like their jobs? What factors influence their satisfaction and motivation? What factors influence their performance and work effectiveness besides the salary and allowance?

I met Associate Professor Anna Thorson for the first time in the winter of 2005 at the Division of Global Health/IHCAR. This was the first time that I had heard the words like perceptions about HIV, quantitative and qualitative research. When she knew of my wish to study at the Karolinska Institutet, we discussed HIV issues in Vietnam and also health workers. I told her that I wanted to know more about human resources for health and for the HIV response in Vietnam.

When I left the IHCAR building to return to my hotel in the evening, it was dark and it was snowing hard. On the way to the bus station, instead of going right, I turned left onto a small path through the trees and my feet were deep in the snow. Then I realised that I had taken the wrong route, and I could not see anyone there. Most of the buildings had turned off the lights in the rooms (except in the corridors). By now, the snow was up to my knees. Then I saw the lights in a restaurant. In the warm light of candles, people inside the restaurant were drinking and eating and chatting cheerfully. Life inside looked so warm and comfortable and I wanted to go to the window and shout for help so that someone would show me the way to the bus station. But I did not do so and continued on the path through the deep snow. After a while, I managed to find the bus station and return to the hotel.

Impressions of that evening are still on my mind; they were like the first warnings signs to me that research is not an easy journey. Later on, I realised that most PhD students have undergone this. And the second lesson was realising that if I had initially asked people about the route in more detail, then I could have avoided some of the difficulties in the snow. That is the start of my long journey from 2005–2013 just to find answers to my questions and to learn how to express myself in the most clear and simple way.

1 BACKGROUND

1.1 GLOBAL RESPONSE TO HIV

HIV epidemic

Globally, 34 million people were living with HIV (PLHIV) at the end of 2011. Although HIV remains one of the world's most serious health challenges, the global response to HIV during recent decades continue to achieve good results [1]. The past ten years have seen unprecedented commitments to global health and development. Worldwide, the number of people newly infected falls, the number of people (adults and children) acquiring HIV infection, 2.5 million in 2011 was 20% lower than in 2001. The number of people dying from AIDS-related causes began to decline in the mid-2000s because of scaled-up antiretroviral therapy (ART) [2]. This progress, however, is fragile and unevenly distributed. HIV incidence is increasing in some countries and regions. More than 8 million people living with HIV (PLHIV) were receiving ART in low-and mid-income countries, but another 7 million people need to be enrolled in treatment to meet the target of 15 million people by 2015 [2].

HIV and stigma

Goffman (1963 cited in Gaudine 2010) defined stigma as 'people's attitudes towards someone who is discredited by physical deformity, abnormal personality, or association with particular groups e.g. based on race, religion or belief' [3]. HIV-related stigma is defined as 'a process of devaluation of people either living with or associated with HIV infection' and HIV-related discrimination as 'unfair and unjust treatment of an individual based on his or her real or perceived HIV status' [4]. In an effort to describe the scope of the impact of HIV-related stigma and discrimination, Parker and Aggleton (2003) argued that such stigma and discrimination 'operate not merely in relation to individualistic differences (as Goffman would tend to emphasise), but even more clearly in relation to social and structural inequalities' as 'political and social processes, which interact with and reinforce pre-existing stigma and discrimination in society' [5].

Earnshaw and Chaudoir (2009) examined the mechanisms and impacts of the stigma on HIV-infected and -uninfected individuals [6]. In the research literature, stigma is described using a variety of terms depending on the context in which the stigma takes place, such as *felt stigma, enacted stigma, courtesy stigma* [7], *anticipated stigma*, *self-stigma*, *secondary stigma* [8], and s*tigma by association* [9]. While much is known about stigma worldwide affecting PLHIV [10], their families [11], and caregivers [12]; less is known about stigma experienced by health service providers who work with PLHIV [13-15].

In many countries, societal norms associate HIV infection with improper or immoral behavior [16, 17]. As a result, health workers caring for patients with HIV in several diverse settings have been found to hold stigmatising attitudes themselves towards PLHIV [6, 18]. In a study on stigma and discrimination towards PLHIV in health facilities in Vietnam, Khuat et al. (2008) described i) *fear-based stigma* i.e., fear of casual transmission and related stigmatising attitudes which led health workers to treat HIV-positive patients differently and ii) *value-based stigma* due to negative values/social judgments and associations between HIV and certain behaviors and groups, such as sex workers and injecting drug users [19]. The international literature has also explored stigma experienced by these professionals in a

variety of regions in the course of their work in both the workplace [6, 14, 20, 21] and at home [13, 14, 18, 22].

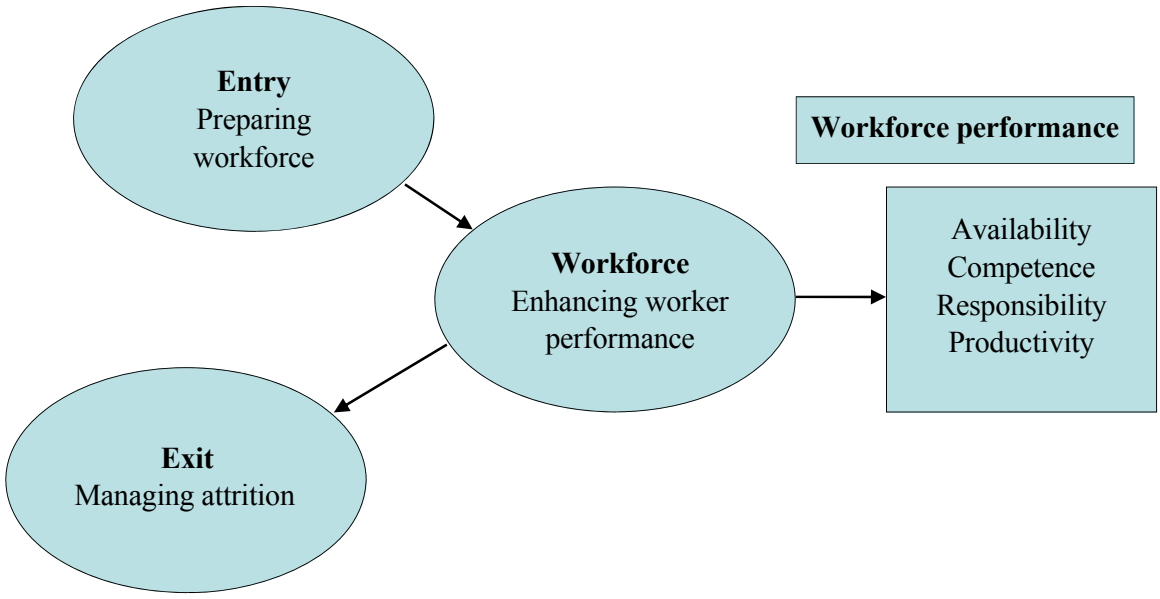
Policy and human resources for HIV response

A growing number of prevalent cases of HIV infection every year lead to increased demand for services to PLHIV which in turn increases the burden on health systems and on the workloads of health workers in HIV service organizations. The response to HIV is currently one of the first priorities in public health and, therefore, it is important to have motivated human resources in place. One of the crucial requirements of a functioning health system is the availability of a qualified and motivated workforce. The shortage of human resources has been cited as the major barrier to HIV services in low- and middle-income countries [22-24].

Health systems and services depend strongly on the size, skills and commitment of the health workforce [25]. It is now evident that in many low- and middle-income countries, the quality of the health workforce is increasingly recognised as key in attempts to scale up health interventions for achieving Millennium Development Goals (MDGs). An effective response to HIV requires a strong and sustainable health system with a well-trained and sufficiently-staffed workforce [26].

There is international consensus that without improvements in the performance of health systems, including significant strengthening of human resources for health, the world will fail to meet the MDGs and to achieve universal access to HIV services [27]. Task shifting, which involves the rational redistribution of tasks among health workforce, has been suggested as an important strategy [27]. This involves moving specific tasks, where appropriate, from more highly qualified health workers to health workers with shorter training and fewer qualifications in order to make more efficient use of the available human resources for health.

In 2006, WHO released the World Health Report entitled “Working together for health” as an effort to help address the issue of shortage of health workers in many countries. The report recognised that people are a vital ingredient in the strengthening of health systems. But it takes considerable investment of time and money to train health workers. The report suggested that countries should improve all three lifespan stages of health workforce namely i) Preparing workforce entry including planning, education and recruitment; ii) Managing migration and attrition; and iii) Making the most of existing staff. These measures will create substantial improvements in the availability, competence, responsiveness and productivity of the workforce [28]. Therefore, appropriate remuneration, financial and non-financial incentives, promotion of lifelong learning, and creating an enabling work environment are needed [28].



Source: WHO. *World Health Report*. 2006

Figure 1: Health workforce lifespan strategies

Human Resources for Health Action Framework (2005)

Most countries have identified and documented the challenges in human resource for health they face, and many have developed human resource strategic plans, but these are not implemented in a systematic way that will achieve the intended outcomes. Often the reason cited for this failure is lack of funding, but even with adequate funding, many plans fail to achieve results because they are not grounded in a comprehensive framework [28]. The Human Resources for Health Action Framework was jointly formulated by the Global Health Workforce Alliance, USAID, and the WHO in 2005. It consists of one Action Cycle with four action phases: Situational Analysis, Planning, Implementation, and Monitoring and Evaluation that surround the Six Action Fields: Human Resource Management Systems, Leadership, Partnership, Finance, Education and Policy. Each action field could have several areas of interventions [29]. By using a comprehensive approach, the Framework can help address staff shortages, uneven distribution of staff, gaps in skills and competencies, low retention and poor motivation [29].

WHO Task Shifting (2007)

In order to address the shortage of health workers for HIV response, WHO proposed the task shifting approach to rapidly increase access to HIV services. Task shifting is the process in which specific tasks are moved from highly qualified health workers to health workers with shorter training and fewer qualifications. By reorganising the workforce in this way, task shifting can make more efficient use of existing human resources [27].

WHO Strategy of Human Resources for Health 2010-2015

The implementations of different health programmes on specific diseases could result in a silo approach. It means spawning the health workforce in particular silos. For example, health workers who work exclusively in the fields of polio, TB or HIV [30]. The Strategy recommends that all healthcare needs across the life-course of the population should be addressed in an integrated way. For example, integration of programmes focusing on mother health, HIV, TB, and other diseases [30]. WHO also urges the Member States to continue to prioritise public spending on health; scale-up and retain the health workforce [30]. Measures for increased staff retention include: improve living conditions, create safe and supportive working environment; promote career development; and enhance social recognition of dedicated health workers [30].

WHO Global Health Sector Strategy on HIV/AIDS 2011-2015

Both WHO and UNAIDS have released five-year strategies 2011-2015, aimed at achieving the ambitious targets for 2015: zero new infections, zero discrimination and zero AIDS-related deaths [26, 31]. The WHO Strategy focuses on four strategic directions: i) Optimizing HIV prevention, diagnosis, treatment and care by identifying new HIV interventions; ii) Leveraging broader health outcomes by strengthening linkages and synergies between HIV and other health programmes, notably for sexual and reproductive health, maternal and child health, tuberculosis, emergency and surgical care and nutrition; iii) Building strong and sustainable health and community systems; and iv) Reducing vulnerability and removing structural barriers to accessing services including protection and promotion of human rights of key populations [26]. In regards to human resources for health, the strategy requests the continued implementation of training, recruitment and task-shifting strategies in order to strengthen health workforce and to minimise the migration of health workers from low-income to high-income countries, and from the public health sector to private sector [26].

UNAIDS Strategy for 2011-2015

The Strategy calls for: i) A revolution in HIV prevention by rapidly adopting scientific breakthroughs; ii) Greater links between HIV care and treatment with other services of maternal and child health, TB and sexual and reproductive health; and iii) Advancing human rights and gender equality [31].

WHO, ILO, UNAIDS Guidelines on Improving Health Workers' Access to HIV and TB Prevention, Treatment, Care and Support Services (2011)

Health workers are at risks of HIV and tuberculosis (TB) infections due to occupational exposure [32, 33]. In 2011, International Labor Organization, UNAIDS, and WHO decided to join forces in developing a 14-point guidelines on improving health workers' access to HIV and TB prevention, treatment, care and support services [32]. A systematic review by Yassi et al. (2012) suggests that interventions should ensure a multi-stakeholder workplace involvement; remove barriers to access; provide confidently in testing; minimize stigma; be integrated with TB programme and other occupational health services [33].

Summary of important points for the global response to HIV

- HIV has proven to be a formidable challenge, but the tide is turning as reflecting in the theme "Turning the Tide Together" of the XIX International AIDS Conference in Washington DC in 2012. The global incidence of HIV infection has stabilized and begun to decline in many countries. The world is nearly on track to having 15 million people living

with HIV on antiretroviral treatment by 2015 [34]. What would have been viewed as wildly unrealistic only a few years ago is now a very real possibility [2]. Many leaders are now speaking about the beginning of the end of AIDS, getting to zero and the start of an AIDS-free generation [34]**.** "Few could have imagined that we'd be talking about the real possibility of an AIDS-free generation." (US President Barack Obama's speech on the World AIDS Day 2011) [34].

- New scientific evidence and innovation have also expanded HIV intervention. The old division between treatment and prevention has been crossed out. It is now clear that ART can dramatically reduce HIV transmission [2].
- Health systems must be prepared to provide care to more people, at an earlier stage of HIV infection and for a longer period of time. Health workers need to be adequately prepared and supported to address the needs of increasing numbers of people who require lifelong care [2].
- Although emergency approaches were instrumental in building or strengthening HIV programmes for rapid scale-up in most countries, their transition to sustainable models of service delivery must be accelerated. HIV response needs to be clearly linked with other national social and economic goals and frameworks so that programmes address the epidemic within their broader health and development contexts [2].

1.2 VIETNAM'S RESPONSE TO HIV

Vietnam

Vietnam is situated in Southeast Asia sharing borders with China to the north, Laos to the west, Cambodia to the Southwest and the sea. The country has a population of 88 million [35]. Vietnam is a development success story. Political and economic reforms launched in 1986 have transformed Vietnam from one of the poorest countries in the world, with per capita income below $100, to a lower middle income country within a quarter of a century with per capita income of $1,130 by the end of 2010. The proportion of the population in poverty has fallen from 58 per cent in 1993 to 14.5 per cent in 2008, and most indicators of welfare have improved. Vietnam has already attained five of its ten original MDGs targets and is well on the way to attaining two more by 2015 [36].

The Socio-Economic Development Strategy for the period of 2011-2020 gives attention to structural reforms, environmental sustainability, social equity, and emerging issues of macroeconomic stability. The overall goal is for Vietnam to lay the foundations for a modern, industrialised society by 2020. Over the last quarter of a century, Vietnam's politics and society have gradually evolved towards greater openness and space for civil participation. Despite this progress, greater openness and opportunity for citizens to participate in governance is needed to support Vietnam's long- term vision of becoming a modern industrialised society [36].

Table 1: Vietnam at a glance

Indicator	Year 2010	Year 2011	Target for 2015
Population (million)	86.93	87.84	<93
Average life expectancy (years)	72.9	73.0	74.0
Maternal mortality ratio (per 100 000 live births)	68	67	58.3
Infant mortality rate (per 1000 live births)	15.8	15.5	14.8
HIV prevalence rate (%)	<0.3	<0.3	<0.3
*GDP per capita (2009): $US 1052			
*Poverty: 58% (1993) to 14.5% (2008)			
*Adult literacy rate (2008): 92%			

Sources: Vietnam Ministry of Health and Health Partnership Group. *Joint Annual Health Review 2012* and * World Bank webpage

The health system in Vietnam is organised along a four-tiered pyramid. At the top of the pyramid is the Ministry of Health. At the second tier are the 64 provincial health departments, each of which serves a population of 0.25-5 million. Each province has at least one general hospital with 200-1,000 beds. At the third tier, there is the district health office, each of which serves a population of about 200,000. Each district has one hospital, which serves as a referral institution for all communal health stations (CHSs). At the bottom of the pyramid are CHSs. The CHSs are responsible for providing primary health care to between 2,000 and 10,000 people. One of Vietnam's greatest achievements over the last 30 years is the establishment of an extensive network of health stations throughout the country. Like all civil servants, health workers are paid low salaries and the low salaries combined with poor working conditions are not motivating [37].

Vietnam is facing some challenges in its health system including a lack of personnel, health facilities, equipment and laboratories [38]. Moreover, the country recently acquired middle-income status, which means that international donors decrease financial supports to health sector including HIV programmes while Vietnam has not yet been able to allocate adequate budgets to fill the gaps [38].

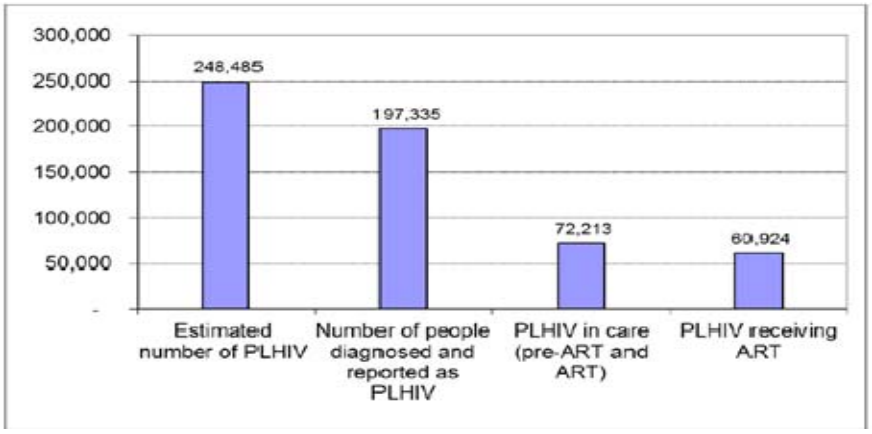
The health system in Vietnam is a mixed system with public and private actors. The private sector has many clinics and 90 hospitals with 5800 beds, equivalent to 3% of total hospital beds in the country. The private health sector remains concentrated in urban area and it plays an important role in curative care, reducing the work overload of public hospitals. There are concerns that the private sector may attract qualified and experienced health staff from public sector and that high healthcare cost will put the financial burdens on patients "the costs will skyrocket, especially out-of-pocket spending" [39].

HIV epidemic

Vietnam has a concentrated HIV epidemic, with the highest prevalence among people who inject drugs (13%), female sex workers (3%), and men who have sex with men (17%) in year 2011 gaps [38]. The adult HIV prevalence (ages 15–49) was 0.45% in 2011 [40]. The first HIV case was reported in 1990 and it is estimated that there will be up to 263,000 PLHIV by 2015 [40].

Before the onset of the epidemic in Vietnam, both drug use and sex work were characterised as 'social evils' which 'destroy morale, creating bad effects on societal culture, public security and contribute to the spread of HIV' [41]. Under current Vietnamese law, drug use and sex work are administrative violations and result in detention for up to two years in the Centres for Treatment, Education and Social Labour (05/06 Centres). These centres are referred to as '05 Centres' for female sex workers and '06 Centres' for drug users. In 2009, there were an estimated 140,559 drug users nationwide who were 'managed' (meaning known to law enforcement officials with dossiers created); of these 33,200 persons were detained in 06 Centres. There were an estimated 28,340 female sex workers nationally that were managed; of these, 1,785 were detained in 05 Centres [42].

By the end of 2011, while 197, 3365 PLHIV were reported through the case reporting system, only 72,213 PLHIV were enrolled in care of whom 60,924 were receiving ART which means that only 11,289 were receiving pre-ART care [38].



Source: *Vietnam AIDS response progress report 2012.*

Figure 2: Cascade of HIV diagnosis, treatment and care in Vietnam (2011)

HIV and stigma

More than twenty years after the first HIV case was reported in 1990, PLHIV continue to face stigma and discrimination. While sex workers and people who use drugs are among those most vulnerable to HIV infection, drug use and sex work are both illegal, creating barriers to accessing vital services and serving to link HIV with 'social evils', increasing stigma and discrimination against PLHIV. The 2010-2011 periods continued to see incidents of children being denied entry to school; workers living with HIV removed from their positions; the stigmatization of men who have sex with men; drug users and sex workers in closed settings without access to proper treatment and care services. A lack of understanding of HIV, prejudice relating to behaviors that are still widely socially unacceptable and a lack of knowledge of the rights of PLHIV are the main reasons behind these discriminatory practices [38].

The government of Vietnam (2010) observed that, in addition to the problem of the limited quantity and quality of health staff, there are also poor incentives and rapid turnover among health staff working with PLHIV. Furthermore, it has also been noted that HIV-related stigma and discrimination act as a disincentive for health staff [43].

HIV and tuberculosis in health workers

In Vietnam, among the ten leading causes of death, tuberculosis (TB) ranked seventh for men and eight for women [44]. TB remains the main cause of mortality among PLHIV [38]. As per new national guidelines, all PLHIV with active TB are supposed to receive both ART and TB treatment; however, only 30% received such treatment in 2011 [38].

Actions should be taken to prevent TB infection in health workers given the fact that in Vietnam: (a) the prevalence of TB in general population is high; (b) TB is the most common cause of death in PLHIV; (c) TB often go undiagnosed for a long time, including PLHIV; (d) TB carries its own stigma; and (e) health workers have a much elevated risk especially in health facilities with HIV services where the prevalence of undiagnosed TB often high.

Policy and human resources for HIV response

In 1993, the Government of Vietnam issued *Resolution No. 05 on sex work control* [45] which stated that "sex work is linked with HIV/AIDS disaster", and therefore prescribed that "female sex workers should be interned in rehabilitation centres for the treatment of sexually transmitted diseases and vocational training". Another Government edict, *Resolution No. 06 on drug control,* which was also issued in 1993, prescribed that all drug users should have compulsory detoxification in rehabilitation centres [45]. In March 1995, the Communist Party of Vietnam issued *Directive No. 52 on HIV/AIDS Control* [45] according to which "HIV control is the country's top priority". The Directive called for "healthy and faithful lives avoiding drugs and prostitution" and further linked HIV/AIDS and social evils in prescribing that "interventions should be integrated with prevention of social evils: first, drug abuse and second, sex work. Police should make timely discoveries and punish drug traffickers, producers, users, brothel owners and decoys" [45].

In June 1996, the Government issued *Decree No. 34 on guiding the ordinance implementation* [45], which, besides defining roles and responsibilities of different ministries on HIV response, listed the responsibilities of PLHIV and mandated that they inform their spouses of their HIV status. The Decree also prohibited PLHIV from working in "certain jobs" such as surgery or obstetrics. District health managers or higher-level authorities were given the authority to request that key populations at higher risk have HIV tests. This often meant that those who fell into the categories of drug users or sex workers were mandated by local authorities to test for HIV, and their results were kept and tracked by local authorities.

The National Assembly's *Ordinance on HIV* [45] came into effect as of August 1st, 1995 to ensure the confidentiality of infected people and provided a counter-balance to the dominant coercive strategies focused on actual or suspected drug users or sex workers as well as PLHIV. With this ordinance, it was prohibited to publically share the name, age, address, or photo of a PLWH. In March 2004, based on the commitments made to the Declaration of United Nations General Assembly Special Session on AIDS (UNGASS), the Government approved its *National HIV Strategy in Vietnam till 2010 with a vision to 2020* [46] . This strategy adopted more specific goals, targets and defined three categories of actions to be taken: first, social solutions including effective leadership, multisectoral collaboration, community involvement and a practical legal framework; second, technical solutions including surveillance, voluntary testing, appropriate medical treatment, and harm reduction

interventions; and third, resource mobilisation and international collaboration. These included action plan on prevention which focus on behaviour change communication, harm reduction including needle/syringe provision, prevention of mother-to-child transmission, voluntary counselling and testing for HIV, blood transfusion safety, and sexually transmitted infection management.

In November 2005, the Communist Party issued *Directive No. 54 on* S*trengthening Leadership on HIV prevention in new situation"* [46]. It instructed "the concerned sectors to complete consistent legal document system for creation of a favourable legal environment and to issue policies for support and care for HIV-positive persons". Mass media had mostly stopped giving negative information and images about AIDS with "skulls and crossbones" [46]. HIV/AIDS had slowly started to be de-linked from the social evils construct, encouraging society in general to develop more sympathy for PLHIV.

The Law on HIV was adopted by the National Assembly in June 2006 which encouraged PLHIV to participate in all social activities, including HIV prevention and also requested the Government "to implement harm reduction interventions". According to the Law, the state budget pays for antiretroviral drugs while health insurance pays for medical expenses. In 2009, following WHO's recommendations of 2006 on antiretroviral therapy (ART) for HIV infections in adults and adolescents, the Ministry of Health issued ART guidelines [47]. In June 2007, the Government issued Decree No. 108 with guidelines on implementation of harm reduction, antiretroviral treatment and the work of the PLHIV as peer educators.

In 2008, the Commission on AIDS in Asia pointed out that the Asian responses to HIV fit a predictable pattern: (1) the denial stage when responses are based on fear or denial; (2) the adhoc stage as countries introduce more interventions, though often not informed by solid evidence; (3) the informed stage when responses are improved and shaped by scientific evidence although problems of where to prioritise remain; and (4) the mature stage when mature responses are achieved and governments deploy the necessary financial, human and institutional resources to achieve a sustainable and comprehensive response.

Vietnam has finalised the new *National Strategy on HIV/AIDS Prevention and Control to 2020, with a vision to 2030* with the goal to keep the HIV prevalence under 0.3% of the population [38]. However, the HIV situation is still complicated with the shift of HIV transmission from blood to sexual transmission, the double risks among higher-risk groups [48]. And the situation is compounded since financial sources from international organisations are decreasing [48]. The new National Strategy has the overall objective of keeping the HIV prevalence of the population under 0.3% by 2020, mitigating impacts of HIV/AIDS on country social and economic developments, and moving towards three UN zero targets [48].

Despite all of these achievements, considerable challenges remain. Half of all people in need of treatment do not have access to it. People are starting treatment late, which is associated with high mortality and severe opportunistic infections [38]. Retention in care is also a challenge, especially during the period between HIV diagnosis and enrolment in care and before initiating treatment. Punitive laws against people, who inject drugs, female sex workers, and the associated stigma and discrimination, are a serious obstacle to early diagnosis, access and retention in treatment and care [38].

Overall, Vietnam belongs to the group of countries with a high ratio of health workers per population (defined as > 5 health workers per 10 000 population) [49]. The number of doctors per 10,000 people continues to increase (from 6.6 in 2009 to 7.2 in 2010) and the number of nurses per 10,000 people increased, too (from 8.8 in 2009 to 9.4 in 2010). Moreover, the proportion of communes with a doctor reached 72% in 2011 [50]. The country currently has 25 institutions providing university-level medical and pharmaceutical training with almost every province having a secondary medical school. This ratio of doctors is higher than in Thailand and Indonesia while the ratio of nurses is on par with Indonesia and Cambodia [39]. Despite this, Vietnam faces problems related to health workforce including: i) shortage and imbalance of the staff in mountainous, rural areas and in some medical fields such as preventive medicine, public health, HIV services; ii) limited quality of the staff because training is not up-to-date; iii) ineffective human resource management including irrational remuneration packages [39].

1.3 STUDY RATIONALE

Viet Nam has achieved the goal of reducing HIV prevalence under 0.3% of the population as stated in the *National Strategy on HIV/AIDS Prevention and Control to 2010, with a vision to 2020*. The country continues its good progress in implementing its new *National Strategy on HIV/AIDS Prevention and Control to 2020, with a vision to 2030* [38]. However, there are challenges to the HIV response such as limited quantity and poor quality of the health workforce; staff reluctance to work in HIV services; international organizations reducing financial supports (currently, international support accounts for 90% of total HIV/AIDS spending), thus reducing the potential for training opportunities and allowances e.g. training or duty trip allowances for the staff. Therefore, the need to strengthen national institutional and human resource capacity to maintain the sustainability of the HIV response is urgent. Enhancing the performance of the health workforce is also needed.

Finally, it is necessary to understand the health workers' perspectives about the HIV response so that necessary measures and interventions can be developed and implemented as described by a senior health official: "When looking for ways to improve performance, we have found nothing works so well as talking to health workers themselves. Their ideas are just amazing. They will tell you what to do" [28].

2 AIM AND OBJECTIVES

AIM

To analyse development of HIV-related policy, describe and explore health workers' perceptions and experiences on the HIV response in Vietnam

OBJECTIVES

1. To analyse HIV-related policy development in regards to policy content, policy-making process, actors and obstacles to policy implementation in Vietnam (Study I).

2. To describe health workers' perceptions and experiences about HIV work and to explore the factors that influence their job satisfaction and dissatisfaction (Study II).

3. To explore health workers' perceptions and experiences in respect of how stigma impacts upon their work with people living with HIV (Study III).

4. To describe health workers' knowledge about HIV (Study IV).

3 METHODS

3.1. STUDY DESIGN

In order to address the research questions presented in Figure 2, this thesis consists of four studies (I-IV), which correspond to four papers (I-IV). The studies may be placed within the Six Action Field of the Human Resources for Health Action Framework [28]. Some conceptual frameworks were used in Studies I, II and III.

Paper I: A qualitative study including semi-structured interviews with policy makers in central government agencies and managers at provincial AIDS centres. The study also used the Health Policy Triangle Framework for study design and data analysis.

Paper II: A qualitative study with focus group discussions and semi-structured interviews with health workers who were involved in management of HIV and AIDS programmes. The study used the Spector' Job Satisfaction Survey for study design and data analysis.

Paper III: A qualitative study including semi-structured interviews with health workers directly involved in the care and treatment of PLHIV in hospitals and detention centres for drug users and female sex workers. The study used HIV/AIDS-related Stigma and Discrimination Conceptual Framework and Model of HIV Stigma Mechanism for study design and data analysis.

Paper IV: A quantitative study including cross-sectional survey with face-to-face interviews with structured questionnaire and self-administered questionnaire on knowledge about HIV among health workers in three provinces in Northern Vietnam.

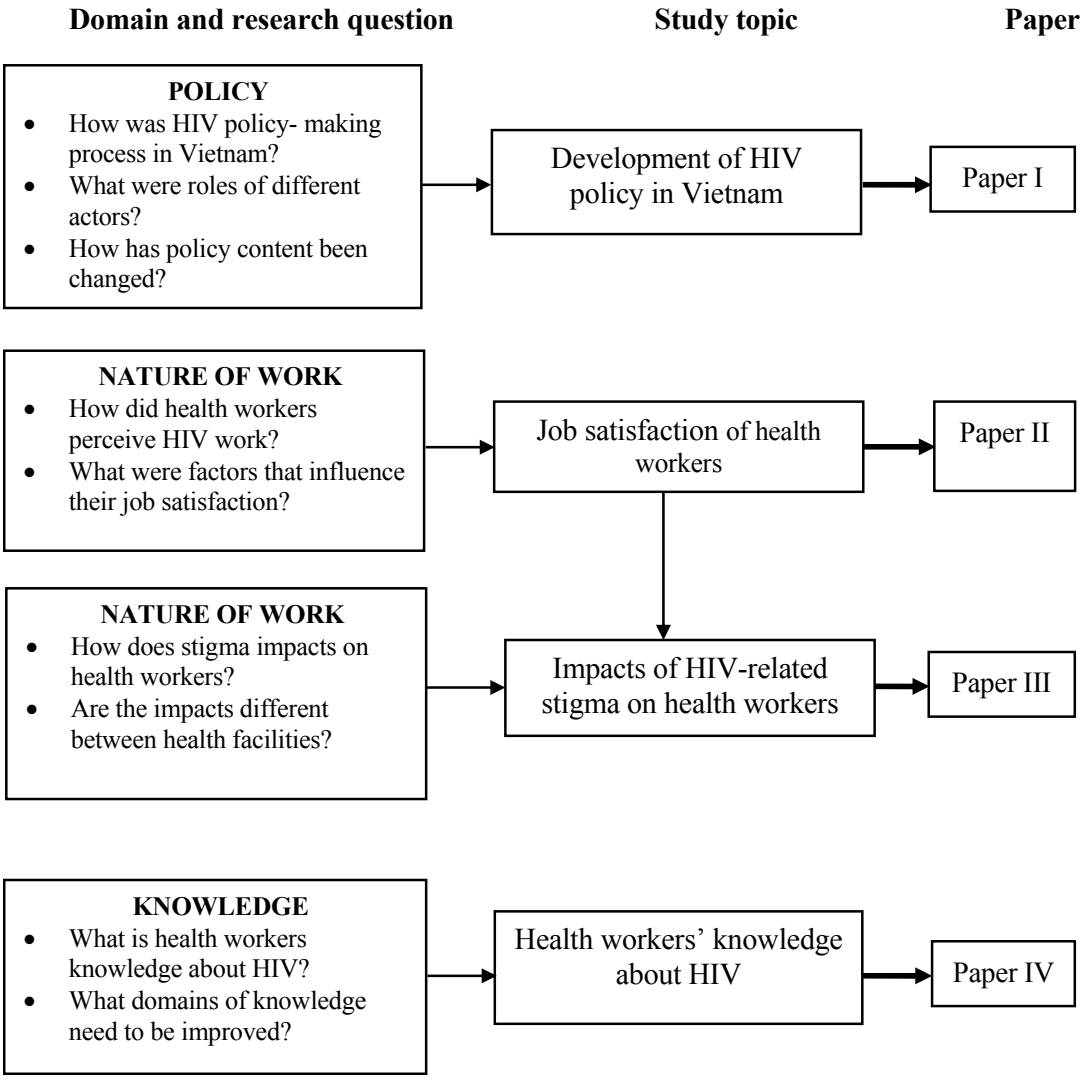


Figure 3: Overview of study design

Table 2: Detailed study design

	Study I	Study II	Study III	Study IV
Study setting	Ha Noi, Quang Ninh	Ha Noi, Quang Ninh, Khanh Hoa, Ho Chi Minh, Can Tho	Ha Noi	Ha Noi, Quang Ninh, Dien Bien
Design	Qualitative	Qualitative	Qualitative	Quantitative
Study participants	Policy makers and health managers	Health workers in HIV work	Health workers in HIV work	Health workers in general
Data collection	Semi-structured interviews and policy document review	Focus group discussions and semi-structured interviews	Semi-structured interviews	Cross-sectional survey
Data analysis	Framework analysis	Thematic analysis	Thematic analysis	Descriptive and inferential statistics

Semi-structured interviews

Semi-structured interviews were conducted in studies I, II and III. The interviews are generally more useful than surveys in eliciting information of a more sensitive nature. The goal of the interview is to obtain useful and valid data on stakeholders' sensitive perceptions of a given policy issue [51]. Interview guides have been used which included outline of topics to be covered, with suggested questions [51]. An interview question can be evaluated with respect to both a thematic and a dynamic dimension: thematically with regard to producing knowledge, and dynamically with regard to the interpersonal relationship in the interview. A good interview question should contribute thematically to knowledge production and dynamically to promoting good interview interaction [51].

Focus group discussion

Focus group discussions (FGD) were conducted in Study II. The aim of the FGD is not to reach consensus about, or solutions to, the issues discussed, but to bring forth different viewpoints on an issue. The FGD are well suited for exploratory studies in a new domain since the lively collective interaction may bring forth more spontaneous expressive and emotional views than in individual, often more cognitive interviews [51].

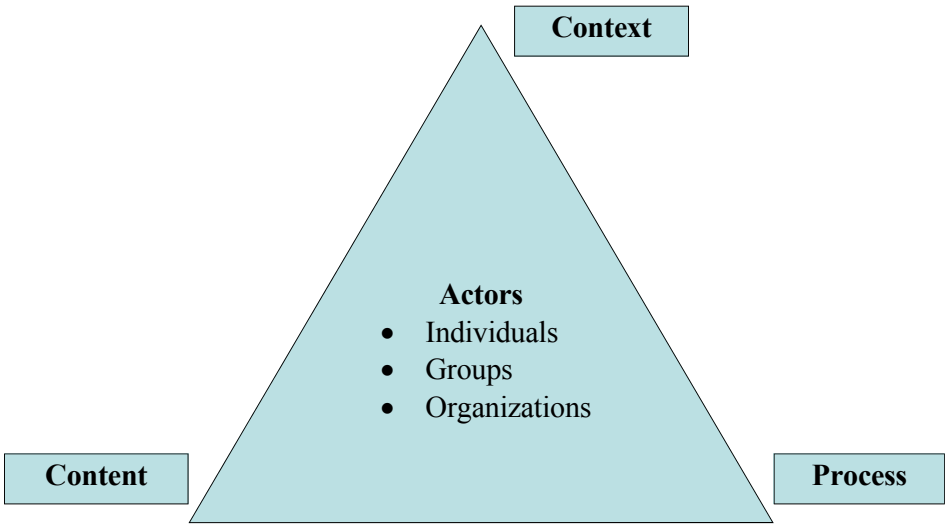
Policy document review

A policy document review was conducted in Study I with the purpose to provide evidence that explains or predicts policy change. Therefore, it is necessary to look for evidence on relevant contextual variables, actors (their power, interests, positions and commitment), content (policy aims), and process [52].

3.2. CONCEPTUAL FRAMEWORK

Health Policy Triangle Framework (Study I)

The Health Policy Triangle Framework [52] was used in Study I to analyse the development of HIV-related policies in Vietnam. This Framework helps to explore the changes in policy contents; the roles of different actors, nationally and internationally, in order to understand their positions and interests; and how they interact and influence the policy. It also helps in understanding the processes through which such influence is played and the context in which these actors and processes interact. A review of HIV-related policy documents was also conducted.



Source: Walt and Gilson (1994)

Figure 4: Health Policy Triangle Framework

Data from key informant interviews and the policy document review were analysed by looking at the content of each policy and the factors that promoted or constrained the policy changes; actors involved in each policy and the factors which enabled or impeded the policy development; processes, which included communication channels and events that intervened to promote or impede the use of evidences in the policy- making process; and contextual factors that enabled or constrained the policy development. The document review involved analysing each policy, starting with agenda setting, going on to policy formulation and implementation, and ending with an evaluation of what happened with this particular policy.

Spector' Job Satisfaction Survey (Study II)

Job satisfaction describes how people feel about their jobs - whether they like or dislike their jobs [53]. Job dissatisfaction has been cited as the primary reason for high turnover [53, 54] and absenteeism [53, 55], which in turn poses a threat to organisations' capacities to provide quality services and meet the needs of customers [56]. Studies have shown that dissatisfied employees are more likely to quit their jobs or be absent than satisfied employees [57, 58]. Therefore, increasing job satisfaction and organizational commitment are potentially good strategies for reducing absenteeism and turnover intentions [58].

There are several theories on job satisfaction. Hackman and Oldham argued that five core job characteristics (skill variety, task identity, task significance, autonomy, and feedback) affect three psychological states (experienced meaningfulness, responsibility for outcomes, and knowledge of actual results) that, in turn, influence job performance, job satisfaction, motivation, and turnover [53, 59]. Herzberg pointed out that certain factors cause job satisfaction, while a separate set of factors cause dissatisfaction [60, 61]. Spector's Job Satisfaction Survey (JSS) assesses job satisfaction through nine job facets: pay, promotion, supervision, fringe benefits, contingent rewards, operating procedures, co-workers, nature of work, and communication [53].

Spector's JSS was chosen for Study II because it was previously developed and applied for measuring the job satisfaction of employees in human services and non-profit organizations including health facilities [53].

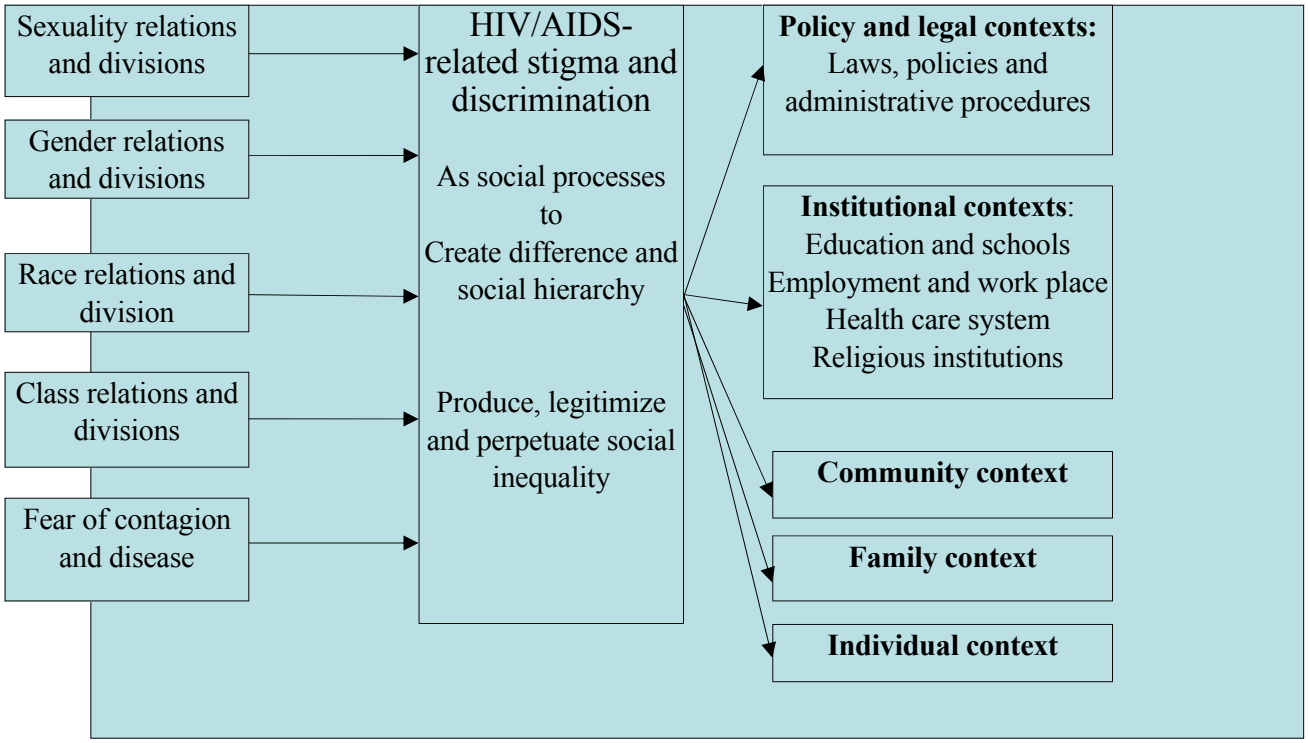
Source: Spector, P.E. *Job satisfaction: application, assessment, causes and consequences*. 1997

Figure 5: Spector's Job Satisfaction Survey

HIV/AIDS- related Stigma and Discrimination Conceptual Framework Study III)

The HIV/AIDS- related Stigma and Discrimination Conceptual Framework [62] was used in the design and analysis of Study III. This Framework indicates that the HIV/AIDS-related Stigma & Discrimination (S&D) interacts with and reinforces pre-existing S&D in society'. In the case of Vietnam, this S&D is associated with drug use and sex work, which are often referred to as 'social evils' [45]. Thus, one of the questions in our study was whether the S&D attached to the work of HIV care and treatment of PLHIV comes from the S&D of the infection itself and/or the S&D associated with the above mentioned concept of 'social evils'. The second important conclusion of the framework is that S&D is a social process which takes 'different forms and manifests at different levels- societal, community and individual'. Based on this framework, interview questions were designed to elicit the impact of S&D in the following contexts: in family, at work and in society.

The S&D should be seen as social processes because they are used to create "difference" and a social hierarchy. They are also used to produce, legitimatize, and perpetuate social inequity. The Framework concludes that social action is needed to respond to stigmatisation and discrimination by mobilizing movements at community, national, and international levels, aimed at social change [62].

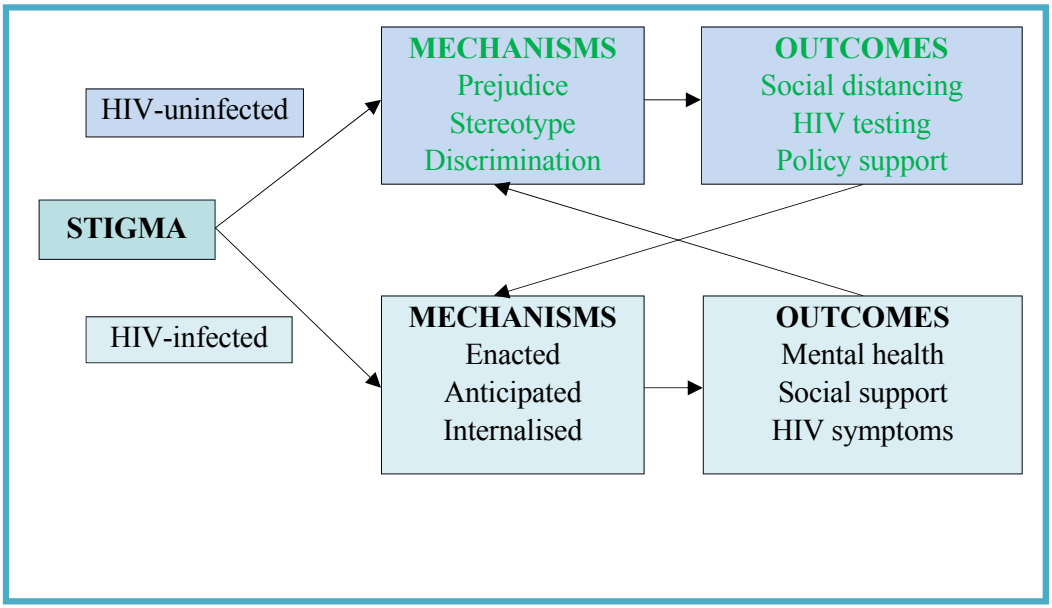


Source: Horizons Program. 2002.

Figure 6: HIV/AIDS-related Stigma and Discrimination Conceptual Framework

Model of HIV Stigma Mechanisms (Study III)

The Model of HIV Stigma Mechanisms [6] was used to understand the mechanisms and outcomes of stigma and discrimination on HIV-uninfected and -infected individuals [6]. The main outcomes on uninfected individuals are social distancing; HIV testing; and policy support. Social distancing refers to the prejudice of negative emotions and feelings towards PLHIV which may prevent people from maintaining relationships with persons who are associated with PLHIV, thus disrupting social ties. Stereotypes of society –based beliefs about HIV may impact testing and risk behaviours because uninfected people do not consider themselves members of groups that are more likely to be infected (for example, people who inject drugs or sex workers). Finally, discriminatory beliefs may lead to support for discriminatory policies. The stigma outcomes on HIV-infected individuals include psychological distress, fear of being socially rejected, and lowered health and well-being [6].



Source: Earnshaw and Chaudoir. 2009.

Figure 7: Model of HIV Stigma Mechanisms

3.3. STUDY SETTING

A total of six provinces in Vietnam have been setting for the studies. In the North: Ha Noi City, Quang Ninh, Dien Bien; in Central region: Khanh Hoa; and in the South: Ho Chi Minh City and Can Tho. On common characteristic of these provinces was that they were all in the list of top ten provinces or cities in Vietnam which had the highest number of PLHIV per 100,000 people. Except Dien Bien as a poor mountainous province, the second common characteristic of these provinces was that they were all the political, economic and social centres of the country. Ha Noi is the capital of Vietnam. Ho Chi Minh City is the biggest economic centre. Quang Ninh has coal mines, sea port and the most touristic attraction with Ha Long Bay. Khanh Hoa is the economic center of the Central area. Can Tho is the capital city of the Me Kong Delta. Dien Bien is one of the poorest provinces in Vietnam but has high HIV rate, because it is situated in the main drug trafficker route from Laos to Vietnam.

Paper I was conducted with semi-structured interviews with policy makers and health managers in Ha Noi and Quang Ninh. Ha Noi was selected because it is the place of the top leadership agencies of the country such as Communist Party, National Assembly, Government, Ministry of Health and Vietnam Administration of HIV/AIDS Control. Quang Ninh was selected in order to explore how the health managers in the province have been involved in the policy- making process and what were the difficulties in policy implementation at provincial level including the difficulties regarding human resources for HIV response.

Paper II was carried out in five provinces in three different regions of the country. Ha Noi City, Quang Ninh, Khanh Hoa, HCM City and Can Tho. The reason of the selection of different cities and provinces was to find out how the perceptions and experiences of health workers in HIV service organisations, vary in different regions with different socio-economic, and cultural conditions.

Paper III was conducted in Ha Noi. The city was chosen because it has both national and city hospitals which provide HIV care and treatment. In the health system of Vietnam, national hospitals which are the highest referral health facilities, have duties to receive severe patient cases from lower level health facilities - including provincial and city hospitals. Ha Noi also has ten 05/06 Centres with around 7,300 detainees out of the total of 23,000 'managed' drug users and 1800 female sex workers. Besides these centres, there was a so- called '09 Centre' which received AIDS patients who could not be cared for by their families. In 2010, this 09 Centre was designated as a hospital with 200 patient beds to receive 05/06 Centre residents with advanced AIDS. In this study, the name 09 Hospital is used as that is the term commonly used by the public.

Paper IV was conducted in 2011 in Ha Noi, Quang Ninh and Dien Bien. In addition to the aforementioned characteristics: Ha Noi has many hospitals, a medical university, and a public health school. Many staff have been trained abroad. Quang Ninh is a coastal province with high economic and cultural development. Health staff in Ha Noi and Quang Ninh have many training opportunities because there are have many large HIV donor-supported projects. Dien Bien is a poor province in a mountainous area. The health staff are limited in number and poor in quality, but they have to deal with quite large number of PLHIV. Dien Bien health workers themselves face many difficulties such as limited income- generating opportunities and fewer chances for training. The selection of the three different provinces aimed to compare the knowledge about HIV among health workers.

3.4. STUDY PARTICIPANTS

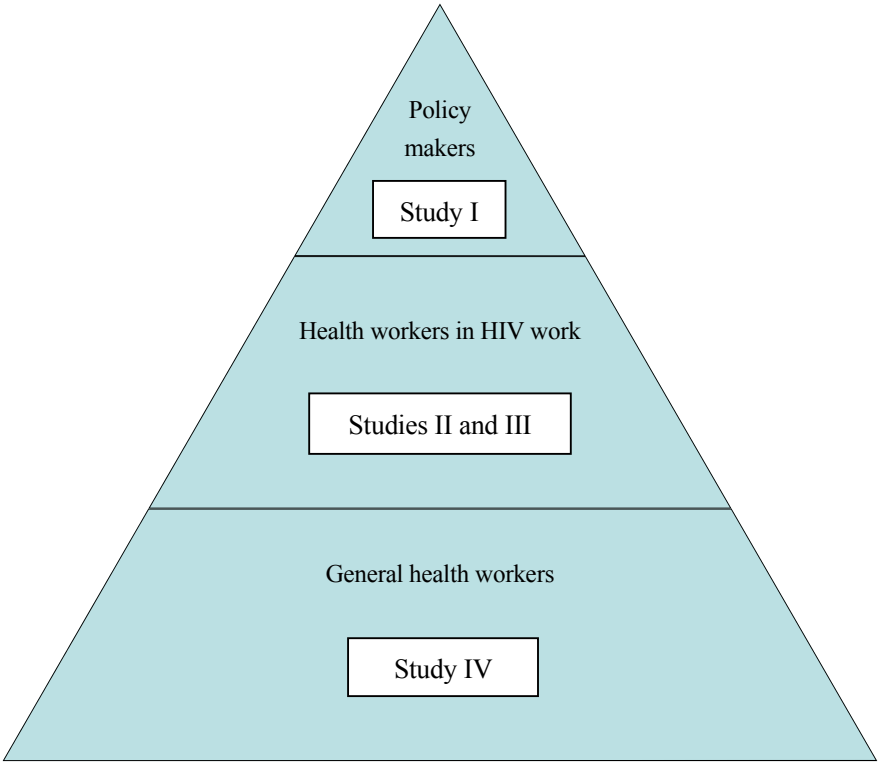


Figure 8: Study participants

Participants for semi-structured interviews (Study I, II, III)

In study I, 17 key informants who were likely to have insider knowledge and insights into the HIV policy- making process were selected purposively based on suggestions made during formative exploratory interviews. Prior to starting data collection, six exploratory interviews were conducted with officials at the Vietnam Administration for AIDS Control (VAAC), the Communist Party Commission and the National Assembly's Department for Social Affairs to help shape the study's focus, identify relevant policy documents and potential key informants. Key informants are people who are particularly knowledgeable about the inquiry setting and who are able to articulate their knowledge –people whose insights can prove particularly useful in helping an observer understand what is happening and why [63]. In Study I, key informants came from a range of relevant statutory agencies and were selected with the aim of achieving a variety of perspectives and opinions. In total, 17 persons (2 women and 15 men) participated in these interviews. They were officials from the Party Commission; the National Assembly's Department for Social Affairs; VAAC; Ministry of Health's Department of Legislation, Department of Personnel and Organization; Provincial HIV/AIDS Centre and Provincial Health Department.

In study II, the semi-structured interviews were conducted with 15 health managers such as directors of provincial health departments, provincial HIV/AIDS Centre for two reasons: First, these people were too busy to attend the two-hour group discussions. Second, the presence of a director during group discussions could affect their subordinates' desire to talk freely about sensitive issues.

In study III, 14 participants were purposively selected from health workers who were directly involved in HIV care and treatment, based on their professional credentials, gender and work settings which were theoretically possible to influence the experience of stigma. These included different types of health workers within national, city and 09 Hospitals as well as 05/06 Centres.

Participants for focus group discussions (Study II)

The participants were purposively selected from national and provincial agencies responsible for HIV/AIDS prevention and control. At the national level, participants came from the Vietnam Administration for HIV/AIDS Control, the Administration for Social Evils Control, hospitals, research institutes, police and mass organisations. At the provincial levels, participants came from Provincial HIV/AIDS Centre, Detention Centre for drug users (Centre 05) and sex workers (Centre 06), hospitals, police and mass organizations. The participants were also diverse in terms of their experience of providing services to PLHIV. For example, health workers in hospitals would have contacts with PLHIV routinely while persons in central government agencies would have hardly any such contacts in the course of their work.

Participants of cross-sectional survey (Study IV)

A cross-sectional study was conducted with 610 health workers in 2011 using structured questionnaires. The study participants had at least a university degree from a medical university or public health school. The sample size was based on data generated by Lien et al. [64] in order to use these results to determine current basic HIV knowledge and with a power level of 90% and confidence level of 95 %; a sample size of 498 was required. Stratification of the sample by region and then by hospitals increased the sample size required to 610 health workers across the three sites. All provincial hospitals and preventive medicine centres in the

three study sites provided details on the number of doctors employed in their facilities. In the case of Ha Noi, the survey was conducted in all large hospitals that belong to the municipality (note that, in Ha Noi, there are also national hospitals that were not included in the sampling frame). In the case of Dien Bien, because the number of doctors in the provincial city was too low, the district hospital in the adjacent district was included in the group. Research teams visited the survey sites and obtained lists of doctors who were then randomly selected. The multi-stage sampling continued until the target sample size was met.

Limitation in selection of participants

Only health workers in public sector health care facilities were selected in all the studies. In Vietnam, the HIV response is a multi-sectoral programme involving several ministries and mass organisations. Each ministry has its own human resource management system and policies, including planning, recruitment and deployment procedures. Information from these systems is not readily available to staff of other ministries or organizations. The result is that there is no comprehensive human resource planning and management for HIV/AIDS prevention, treatment, care and support. Therefore, one of the recommendations for future research is that there should be studies about the role of private health sector in providing diagnostics and treatment practices for PLHIV in Vietnam.

3.5. DATA COLLECTION

Semi-structured interviews (Studies I, II, and III)

In study I, the interviews were conducted in 2007 under conditions of privacy in the offices of the informants. Permission to tape the interviews was sought and granted by all key informants. The interviews were conducted in Vietnamese. To capitalise on the time available during the interviews, an interview guide was drafted, so that common issues would be raised with all or most respondents. The following issues were raised: respondents' experiences and opinions on HIV policy- making processes, the roles of different actors in contributing to or influencing the HIV policy process, changes in and appropriateness of the HIV policy content, and views on anticipated or actual obstacles to policy implementation. Each interview lasted approximately one hour.

In Study II, 15 interviews were conducted in 2009 with senior health managers. Each interview was conducted within one hour and using the same question set that was used for the group discussions, tailoring them to the positions of the individuals interviewed. The guide for focus group discussions and in-depth interviews was developed based on the Human Resources for Health Action Framework (2005). The guide consists of questions covering six fields: 1) Human resource management system; 2) Leadership and capacity for multi-sector collaboration; 3) Partnership for multi-stakeholder cooperation; 4) Finance; 5) Education: Pre-service and in-service training; and 6) Policy.

In study III, the interviews were conducted in 2010 with health workers in hospitals and detention centre. The interview guide focussed on: i) participant's job history and description of daily work; ii) reason for choosing HIV work; iii) factors affecting job satisfaction and dissatisfaction; iv) perceptions and experiences of stigma from society, families and colleagues; v) fears of infections and vi) plans for the future. The interviews were conducted in Vietnamese. One research assistant, with two years of experience working in public health, was responsible for interview- recording and note-taking. Each interview lasted approximately 90 minutes. Soon

after each interview, the first author listened to the tapes, looked at the notes and discussed impressions with other members of the research team. The authors discussed and agreed on the adjustments to the interview guide and/or focus of the next interviews.

Review of HIV policy documents

Prior to starting data collection for this study, I conducted six exploratory interviews with officials at the Vietnam Administration for AIDS Control (VAAC), the Communist Party Commission and the National Assembly's Department for Social Affairs to help shape the study focus, to identify relevant policy documents, and potential key informants. During the formative research stage, policies listed in the Ministry of Health's Book on Legal Documentation on HIV (2004) and on the website of the UNAIDS Vietnam (www.unaids.org.vn) were reviewed. All major HIV policy documents issued by the Party, National Assembly and Government were selected for the study:

- Directives No. 52 (1995) and No. 54 (2005) issued by the Communist Party Commission for Popularization and Education;
- National Assembly's Ordinance (1995) and Law on HIV (2006);
- Government's Resolution No. 05 on sex work control (1993) and No. 06 on drug use control (1993);
- Decree No. 34 (1996) and No. 108 (2007) on guiding the implementation of the 1995 Ordinance and the 2006 Law on HIV;
- National HIV Strategy of 2004.

Focus Group Discussions (Study II)

The first author and one researcher conducted seven FGDs with 80 participants in 2009. The FGDs were applied to get different opinions and ideas about issues that came up during discussion. Some conditions were set up to ensure effectiveness of discussions like building up trustful comfortable atmosphere, making sure that one focus group included participants of same level of management structure. The focus group included participants of same level of management structure. Each discussion lasted for 2.5 hours. The guide for FGDs was developed based on the Human Resources for Health Action Framework (2005). The guide consists of questions covering six fields of human resource management: 1) Human resource management system; 2) Leaderships; 3) Partnership; 4) Finance; 5) Education: Pre-service and in-service training; and 6) Policy on human resources. The FGDs were tape-recorded and, in addition, written notes were taken. Then, the tapes were transcribed, translated into English and imported into the computer software NVivo 8 that was used for data analysis.

Face to face interviews with structured questionnaire (Study IV)

The development of the questionnaires was guided by topic areas, such as HIV epidemiology; prevention, care and treatment; drug and methadone maintenance therapy; palliative care and nutrition; and cross cutting areas, including stigma and discrimination. The literature was searched and appropriate available items from similar previous studies were identified. HIV-related knowledge among health workers was assessed within 48 domains. Each domain scale of knowledge was measured with 4 to 9 items, each of which had a value of 1 (correct) and 0 (incorrect), which were summed to form a composite score, with higher scores on the scale reflecting better knowledge (Cronbach's alpha ≥ 0.60 in most domains).

As many of the items that were included in the questionnaire utilised some scales developed in

previous studies, it was important to examine their inter-item reliability and construct validity. In terms of reliability, we found that the Cronbach's α coefficient (K-R20 and standard) in most scales approached the acceptable level of 0.60 or over. For construct validity, most scales also scored an acceptable threshold (β > 0.30) in most cases, suggesting that they could be applied within the Vietnamese context. Most of the correlation coefficients were found statistically significant with $P < 0.05$. The confirmatory factor analyses showed a generally good fit of the models ($P > 0.05$), except for some with P close to the fit value. Overall, these data appeared to indicate that the aforementioned scales had both reliability and construct validity, given the statistical viewpoints of Hair et al. [65].

Self-completed questionnaire (Study IV)

The data collection was undertaken by researchers from the Hanoi Medical University. Face-to-face interviews were conducted using the first questionnaires on knowledge and attitudes. The second questionnaires on attitudes and opinions regarding drug use, stigma and discrimination were filled in by the study participants.

3.6. DATA ANALYSIS

Study I

This study used framework analysis, which is a type of qualitative content analysis that summarizes and classifies data in a thematic way in order to facilitate the policy- and practice-oriented application of findings [66]. In this study, the first step of data analysis involved the first two authors' familiarization with the data, through repeated reads of documents or interview transcripts. Then, thematic analysis was carried out, where a coding schema was developed. Codes were discussed between the first and the second author and manually applied to the data systematically, a step referred to as 'indexing' [66]. Lastly, relationships were looked at between the codes, both within individual documents and interviews, as well as across all data sources, in order to explore associations between the concepts, which were referred to as themes. Themes were developed based on the application [67] of Health Policy Triangle Framework.

Nine HIV policy documents, which were issued between 1993-2006 including Party directives, National Assembly's ordinance and law, Government strategy and plan, were studied. Initially, the first two authors read all the documents from one agency e.g., the Party Directives, in order of issue so as to identify important changes in the contents. A similar approach was used with other policy documents. Thereafter, dates of issue were compared and all documents were reviewed by the first author to understand whether changes in one policy document had influenced those issued subsequently. The document review provided information mainly on the content changes, sometimes on the actors, but rarely on how and why these changes happened.

Study II

In the process of analysis, different aspects of job as described by the study participants were grouped into categories corresponding to the facets of job satisfaction, while the categories altogether constituted an overall assessment of job satisfaction. As the analysis did not exclude other important factors that could be found in the data, new categories (not originally included in the theoretical framework) were added. The study applied a hybrid approach of content analysis that combined the data-driven inductive approach of Boyatzis (1998) [68] and a priori established list of categories derived from Spector's JSS [53] to organise and analyse the data.

Such an approach was used and described by Fereday and Muir-Cochrane as a hybrid approach for inductive and deductive coding and theme development [69]. Similarly, Atkins et al. initially analyzed data using qualitative content analysis, and then organized the resulting categories under constructs of normalization process model as a priori framework [70].

According to this approach, a previously- existing theoretical framework was used to organise the data, and simultaneously apply data-driven coding in order not to miss some important context-related factors that could not be accounted for in the original theory. The process of data coding and analysis was carried out in several steps. Initially the transcripts were read several times to achieve familiarity with the content. Following that, the meaningful units were detected in the text, labeled and coded. The unit of analysis was a complete expressed idea or a thought, which normally consisted of one or several sentences. The similar codes were constantly compared with one another in the process and some coding was revised. Moreover, it was deemed essential to constantly return to the context of the separate references to ensure compatibility of the code with the raw data (in Vietnamese). Then, the codes were grouped under sub-categories, which were compared and agreed upon between authors. Using the Spector's JSS as a framework, the sub-categories were organized into nine categories correspondent to the nine facets. Following further analysis, themes were developed. Generating themes involved more abstract analysis and further interpretation of the results derived from clustering data into categories and subcategories as described by Boyatzis [68] and Graneheim and Lundman [71]. Data were coded and analysed in computer software NVivo 8.

Study III

Data were analysed using thematic analysis [68, 71]. The Vietnamese researchers read through all transcripts several times to identify the key messages and to obtain a sense of the whole data set. Each sentence or paragraph was coded. Similar codes were clustered together and collapsed into categories and sub-categories. Based on this initial analysis, a summary of key messages and quotations was translated into English and these were discussed among all co-authors. Themes were created, based on the relationship between categories [68], and then organised according to the method drawing on the Horizons Program's Framework (2002) [62].

Study IV

Data were entered using ACCESS software; double entry was applied to the data which were then transferred into STATA 10.0 for analysis. Descriptive statistics were mainly applied to analyse the data. A multivariable linear regression analysis was conducted on factors affecting knowledge on HIV-related stigma and discrimination as a dependent variable. This variable's reliability and validity met the requirements of Cronbach's $\alpha \geq 0.60$ [72] and $\beta > 0.30$ [65] which has been used in previuos studies. Health workers' attitudes on isolation and separation of PLHIV and attitude towards PLHIV were also selected. The reliability and validity of these two variables met the requirements of Cronbach's $\alpha = 0.75$ [73] và $\beta > 0.30$ [65]. Value and reliability construct have been checked in previusos studies by Li et al.[74] in a country (China) with similar cultural and social conditions to Vietnam.

3.7. ETHICAL CONSIDERATION

Ethical permission for the study was obtained from Hanoi Medical University (reference number: 22/IRB), Ha Noi, Vietnam. Participants for interviews in Studies I, II, III were given

information about the studies, informed that only their department and agency would be identified in relation to their quotes, and that they could withdraw from participation in the study at any time. Those agreeing to participate provided oral informed consent prior to beginning the interview. Participants for FGDs in Study II provided informed consent via oral agreement before the discussions. Note-takers did not record the names of the participants and the findings of the interviews and discussions were not shared outside the research team.

4 RESULTS

4.1. DEVELOPMENT OF HIV-RELATED POLICY IN VIETNAM (PAPER I)

HIV-related policy formulation

It is easy to identify Vietnam's trajectory through the first three stages over this 12 year period. In the early and mid-1990s, Vietnam attempted to control the disease by isolating drug users and female sex workers in detention centres. Similar practices were implemented earlier in other countries, where PLWH were not even allowed entry into the country [75] or patients were kept in special hospitals [76]. These approaches were manifested as the stage of denial and fear [77] where the emphasis was placed upon high risk groups rather than high risk behavior [78]. In recognition of punitive control measures that made cooperation between those at risk and the authorities almost impossible, Vietnam began to make significant changes to its national policies from the early 2000s, when the Government became aware of new and effective strategies including antiretroviral treatment, condom usage promotion, methadone use and the distribution of needles for injecting drug users. These strategies were the result of Vietnam having moved from a denial stage in 1996 to a more evidence-informed engagement stage by 2006 [77].

Figure 9 shows a timeline for the policy making process in Vietnam, illustrating the major policy documents for the three main actors: Communist Party, National Assembly and the Government. Vietnam's HIV policy evolved considerably during the 12 years with HIV getting on to and staying on the agenda. This was just one of the important links between the Party and the Government implementing bodies, with Party directives preceding most of the important Government legislation on HIV. The Figure illustrates how many of Vietnam's important policies on HIV were first formulated and adopted during 1995- 1996, and were later replaced by new policies in 2005-2006, along the lines of those reported above.

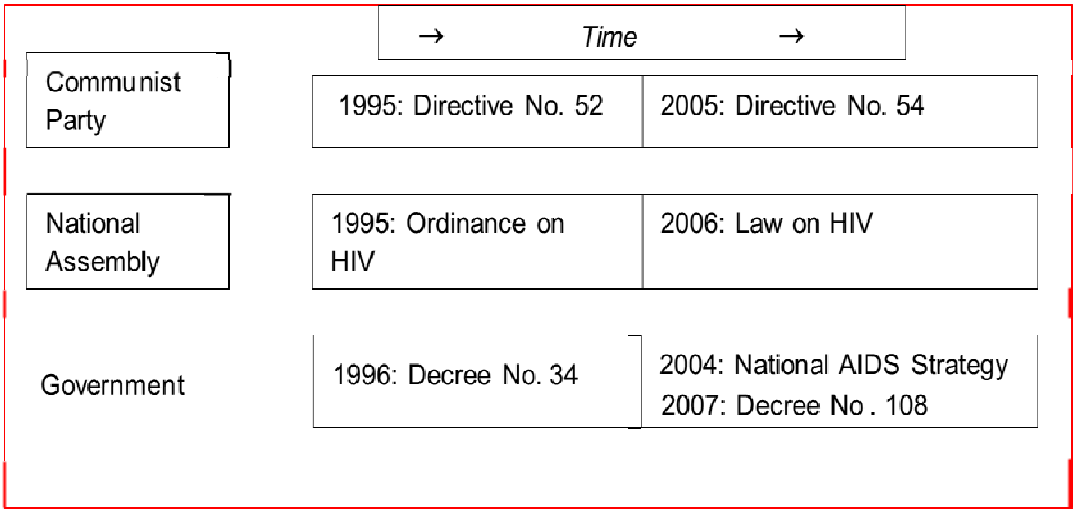


Figure 9: Timeline of evolution of Vietnam's response to HIV

Figure 10 presents the actors involved in health including HIV policy-making process in Vietnam. The main categories were the Communist Party; the National Assembly and the

Ministry of Health. The Communist Party is the ruling party in Vietnam. Through its resolutions and directives, the Party provides the policy directions for all aspects of national life. The Party has several commissions; the Commission for Popularization and Education is in charge of science, culture, education and health. The Commission formulated Directive No.52 and Directive No. 54. The National Assembly has the power to make ordinances and laws and takes direction from Party Commissions. Its Committee of Social Affairs is responsible for appraisal of ordinances and laws in health and social areas including the Ordinance on HIV in 1995 and the Law on HIV in 2006. The Ministry of Health is responsible for drafting legal documents such as ordinances and laws relating to the health sector, and then submits them to the National Assembly for approval. The Ministry is also in charge of developing health strategies and submitting them to the Government for approval.

The Party was described by many key informants as providing leadership and direction:

Vietnam's political system is that the Party takes overall leadership on everything. The Party's directives and resolutions are concretized by the National Assembly into law and ordinances. The Government turns them into strategies and plans. The Party raises the issues, the National Assembly brings out the solutions, and the Government implements.

Party key informant

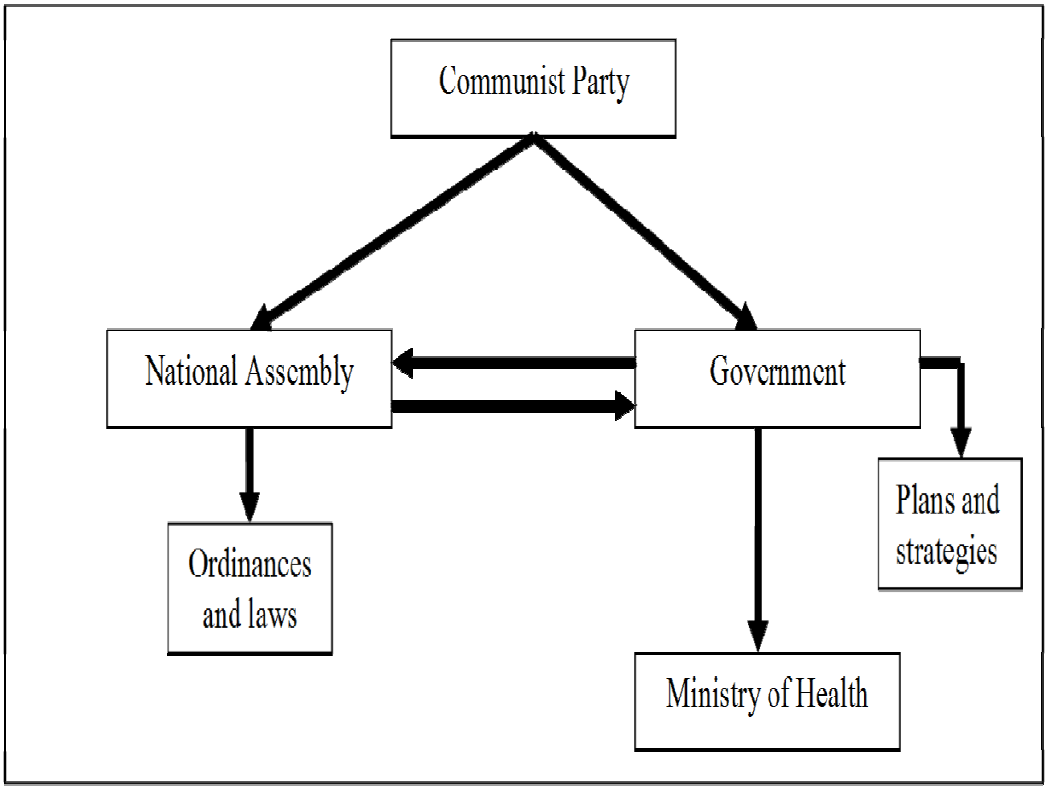


Figure 10: Actors involved in health policy- making process in Vietnam

HIV-related policy implementation

Before 2005, HIV services were mainly carried out by part-time staff in provincial preventive medicine centres. In order to increase the number of staff in terms of quantity and quality for successful implementation of the National HIV Strategy [79], in 2005 the Ministry of Health

decided to establish the Provincial HIV/AIDS Control Centres under the Provincial Health Department, to be responsible for HIV prevention and control [80]. Still, recruitment of staff at the centres has not been easy. Reasons for difficulties in recruiting were described as: (1) health staff preferred to work in curative care, and in hospitals, rather than in preventive care, (2) health staff preferred to work in areas other than HIV work because of the low salaries and incentives, (3) health staff are reluctant to work with drug users and sex workers because of the extreme social stigma associated with such groups.

There are shortages of staff in terms of quantity and quality. New models of treatment and care take place even at district levels. Shortages of staff in districts are even more serious/.../ HIV/AIDS Control Centres in many provinces have only 5 or 6 people. It was very difficult to recruit new staff/…/People said they prefer to work in hospitals to cure patients. Very few are willing to work in preventive area, especially on HIV/AIDS.

Key informant from central agency for HIV/AIDS Control

Low income was reported as one of the main reasons for poor work motivation. HIV work was considered as requiring less input from medical professions and as having few career development advantages.

Prevention deals with humanitarian issues like health education or public health. These programmes do not have much money. Therefore, staffs don't have any other sources of income. Meanwhile a doctor just needs some hours working in private clinics and earns as much as the monthly salary of preventive staff.

Key informant from central agency for HIV/AIDS Control

4.2. JOB SATISFACTION OF HEALTH WORKERS (PAPER II)

HIV work is perceived by health workers as having both satisfactory and unsatisfactory aspects. Factors causing job satisfaction included training opportunities, social recognition, and doing meaningful tasks. Factors causing job dissatisfaction included unsatisfactory compensation, work-related stress, and stigmatization of the profession because of association with PLHIV. Table 1 list these categories and factors and identifies them according to the positive or negative connection that the participants made to the overall feeling of job satisfaction.

Factors causing dissatisfaction

Unsatisfactory compensation

Pay and monetary benefit was one of the factors most frequently mentioned in the interviews and group discussions affecting job satisfaction. This theme reflects the feeling shared by the participants of being poorly compensated in terms of salaries, incentives, and benefits. While the compensation discussion is a natural part of the pay and fringe benefits category, the less expected phenomenon is the participants' emphasis that work hazards (exposure to HIV and other infections) should result in additional remuneration. Dissatisfaction with compensation affects employees' overall attitudes about their jobs. Participants reported that their current level of pay was low and, therefore, did not meet their needs to support themselves and their families.

People left because salaries were not enough to live on. I can still sit here because I can rely on my husband; otherwise, my own salary would not be enough to buy medicine [if I get sick]. (National agency FGD participant)

Current salaries for health workers are perceived as insufficient to satisfy basic needs. Therefore, staff are forced to look for alternative sources of income. Many of the participants are entitled to various allowances when attending conferences, seminars, workshops; working on outreach activities, or short-term consultancies, especially for the international donor–funded projects. The additional income-generating opportunities common among other health workers, such as those at private practices, are not available to HIV health care workers because of the poverty of patients with HIV-related illness and the aforementioned stigma. Furthermore, non-HIV-infected patients are reluctant to see doctors who work with these infected patients

Table 3: Categories and factors causing job satisfaction and dissatisfaction

Categories	Factors causing job satisfaction (+) and dissatisfaction (–)
Pay	(−) Unsatisfactory salaries (−) Limited opportunities for additional income generation (−) Difference in pay between payroll and project staff
Promotion	(+) Recognition leading to promotion (−) Job insecurity in project staff
Supervision	(−) Inadequate supervision measures (−) Lack of understanding of supervisory tools (−) Lack of positive feedback from supervisors (−) Rewards tied to annual appraisal: weak, poorly implemented
Fringe benefits	(+) Adequate number of training opportunities (−) Uneven distribution of training opportunities (−) Uneven distribution of benefits (−) Disincentives
Contingent rewards	(+) Recognition in society (+) Intrinsic motivation (+) Meaningful tasks
Operating procedures	(−) Personnel policies: excluding some categories of staff, not enough transparency
Nature of work	(+) Many job opportunities (−) Uneven distribution of job opportunities (−) Increasing workload (−) Risk of being infected through contact with PLHIV (−) Work-related stress
Communication	(−) Outdated and inefficient ways of communication (−) Low capacity in IT for communication
Stigma	(−) Attitudes towards key populations at risk in society (−) Stigmatization of PLHIV (−) Stigmatization of profession because of association with PLHIV

Doctors have difficulties to work in private clinics. For example, patients do not want to come to see them for ear-nose-and-throat treatment. HIV is stigmatized, so normal people do not come for medical check-ups and treatment with these doctors. (Southern Province FGD participant)

Uneven distribution of fringe benefits

Because of the low salaries, fringe benefits are an essential part of employees' income that supplements their payroll earnings. Receiving lower or no benefits is considered a major cause for dissatisfaction among staff. Nevertheless, the distribution of the benefits is unequal among staff categories. Some professions, not necessarily the ones with the highest wages, receive small or no benefits at all. The distribution is uneven between different health facilities.

Allowances for workers at communes and villages are around VND120, 000, which is just enough to fill up the gasoline tank really; thus, it is hard to require them to concentrate only on work. I myself feel so sad thinking about this. There is no insurance system for them, as they are not full-time but social workers. (Southern Province FGD participant)

Disincentives

Disincentives are practices that some managers or leaders perform with negative consequences to payment or benefits of the staff and which have a discouraging effect on staff morale.

Some donor projects can provide high salaries but the Vietnamese managers decide the lower levels saying that [it is needed] to keep the levels close to government salaries and that such high levels are not sustainable when projects phase out. The projects suggest 4 million but we just agree with 2 million. Some people said their salaries are even lower than that of the government because the Vietnamese managers lower them. (Southern Province FGD participant)

I see that some projects do not pay at all. One example is our project; there was no remuneration while they should pay us at least some kind of allowances for our working time for the project.

(Southern Province FGD participant)

The practice of benefits sharing can be observed in some workplaces. This involves dividing the allowance that some part of staff receives among the total number of workers. The reasoning behind this action is managers' understanding of fairness and equality.

The reregulation on hazardous allowance is that health workers who work directly with patients with HIV-related illness receive an additional 40% salary allowance. This is a good incentive. However, this allowance is not applied to all staff, and if I am the doctor who cares for patients, when I am on duty or annual leave, someone else will take care of the patients. As allowance is given to a certain number of staff, the department has to make adjustments. For example, the department has allowances for 4 doctors and 2 nurses out of 10 staff, so the department has to redistribute allowances to all in a harmonious way. (National agency FGD participant)

Both practices are possible because of a lack of policy enforcements to protect workers against managers abusing their power in terms of redistribution of budgets intended for staff compensation. The practices are perceived as discouraging and harmful to the staff.

Weak supervision

This theme reflects the perception that there is a lack of supervision for the employees, which affects their feelings about their jobs. The current supervisory practice focuses on task accomplishment or failure. Therefore, achievements remain underappreciated and unrecognized, which can be frustrating for the staff. From the interviews and focus groups, we conclude that the feedback mechanism between the managers and subordinates is rather weak.

The important thing is to train people who conduct supervision. I have been trained so the work is somehow less difficult for me, but my staff have limited supervision skills. Even in medical university, they do not teach about supervision. People conduct supervision based on their own assessments. We have to do supervision step-by-step because people must change their views that supervision is a fault-finding task. (Northern Province interviewee)

The quotation above is an example of the recognized need for supervision and the current lack of supervisory training at medical schools and elsewhere. In addition to the lack of supervisory capacity, other staff members have a limited understanding of supervision. Junior staff tend to be afraid of strict supervisory measures that they refer to as "inspection" and try to resist them, while the supervisors rely on their own judgments about how supervision should be conducted. In the interviews, lack of positive feedback from supervisors was related to the current ineffective system of monitoring tasks, which fails to record and recognize employees' good performance and achievements. This unsystematic way of monitoring performance is perceived as unfair and might be related to dissatisfaction.

If our performance in this is good, nothing will happen, but in case performance is not so good, it will be reflected in our evaluation. (Southern Province FGD participant)

Work-related stress

Participants expressed concerns about the increasing workload because of the growing number of HIV infections, which results in an increasing demand for treatment, care, and support. They also expressed their concerns about the increasing number of patients and the growing workload with the number of staff remaining the same. The increasing workload puts higher demands on staff, which results in higher turnover, and ultimately increases the workload of the remaining staff.

We lack sufficient staff. It is difficult to recruit more doctors and nurses. Newly recruited staff stayed with us for a few months then moved to other departments or to other hospitals where working conditions are better; there are fewer risks of infections and less stress. (Southern Province FGD participant)

A feeling of being overloaded at work is known to influence an employee's attitude towards their job. However, in our findings, job dissatisfaction with the growing work overload could be further increased by the feeling that no effort is being taken by management to improve the situation. The fear of infection combined with stigmatizing attitudes toward the patients were also related to the participants' levels of stress. Fear of transmission should not be a significant issue for employees, assuming they are well informed about the routes of transmission and prevention measures.

The staff that do counselling and make contacts with infected people, they do not get any extra allowance. In prisons, prisoners with HIV infection are numerous. Many of our staff also are infected with tuberculosis. We proposed that doctors and nurses who work directly with these prisoners should be given some incentives. (National agency FGD participant)

One of the most important factors contributing to staff dissatisfaction was stigma. Because of the concentrated pattern of the HIV epidemic in Vietnam, infected individuals are likely to be drug users and sex workers. These groups are highly stigmatized in Vietnamese society and have been referred to as "social evils" by the government. Some employees seem to share these attitudes and, therefore, resist direct contact with PLHIV whenever possible.

The biggest constraint is that staff may not want to have direct contacts with infected people, most of whom have relations with social evils. (National agency interviewee)

The combination of prejudice against PLHIV and the perceived high risk of infection are responsible for stigma among health workers. HIV work is a stigmatized profession, and the stigma toward health workers originates primarily from attitudes toward the key at-risk populations. Furthermore, there is a great deal of prejudice from colleagues in other health domains.

Because of the prejudice toward PLHIV, there is also prejudice towards the health workers who care for them. I even said to our management that we treat patients and we are put in the same group with them. Doctors who are assigned to HIV treatment are also considered as lower grade than doctors in other departments. (Southern Province FGD participant)

Factors causing satisfaction

Training opportunities

Opportunity for training was a top reason for staff satisfaction. There are plenty of training opportunities; however, they are usually only available to mid-level staff at the provincial and central levels. The managers recognize the importance of training for staff and support them in using these opportunities.

HIV services have many activities and projects. It is a good place for young staff to try their capacities. It is obvious that their capacities improved a lot when working here. They have many opportunities for learning, both in the country and overseas. (National agency FGD participant)

Intrinsic motivation

This section describes which aspects of the participants' jobs they find motivating. First, the staff enjoy their work because of its humanitarian nature and their sympathy and willingness to help others.

Most people are dedicated to social development and human values, so they are happy to carry out these activities. (Southern Province FGD participant)

After some time of working here, I also have found the work interesting. I feel sympathetic toward the patients, if you think of them as your relatives, you will have more sympathy.
(Southern Province FGD participant)

Meaningful tasks

The work on HIV care and treatment was related to higher morale and awareness of work quality. Participants clearly feel the importance of their work. They receive meaningful tasks and see that they can make an impact with their inputs. They feel responsibility, high satisfaction from the work, and the earning of respect from others.

We love our job. We devote our efforts to work to gain effective outputs. Some international organizations have offered me jobs with good salaries, which would be great for my family, but these jobs cannot contribute as much as the current one. Here, my work will have broader influence. (National agency FGD participant)

Social recognition

Being awarded with titles such as "Best Employee" was considered important for several reasons. First, it is honourable to receive such recognition from the organization, as exemplified by a participant's views:

If they work well, the organization will give rewards, possibly in cash. There are also many honourable titles to be awarded, for example, Advanced Employee, or Best Employee. (National agency interviewee)

The second reason why titles are perceived as important is that they provide the possibility to be recognized by management, which might lead to a promotion. Overall, we conclude that participants value rewards such as monetary benefits and recognition from society. However, participants consider the system of monitoring employee performance—the basis of distributing awards—unfair. For job satisfaction, this means that rewards and recognition positively influence employees' attitudes towards their jobs. However, poor implementation of annual awards is a reason for dissatisfaction. Five themes related to job satisfaction were generated.

Table 4: Themes of job satisfaction

Themes	Categories	Factors
Unsatisfactory compensation	Pay	Unsatisfactory salaries Limited opportunities for additional income
	Fringe benefits	Uneven distribution of fringe benefits Disincentives Uneven distribution of training opportunities
Weak supervision	Supervision	Lack of positive feedback from supervisors Lack of understanding of supervisory tools Inadequate supervision measures
	Contingent rewards	Annual staff appraisal and rewards: unfair, poorly implemented
	Communication	Outdated and inefficient ways of communicating
Work-related stress	Nature of work	Increasing workload Perceived risk of being infected through contact with PLHIV
HIV-related stigma	Nature of work	Negative attitudes towards key populations at risk in society Stigmatization of PLHIV Stigmatization of professionals by association with PLHIV
Motivation factors	Nature of work Fringe benefits Contingent rewards	Training opportunities Intrinsic motivation Meaningful tasks Social recognition

4.3. IMPACTS OF HIV-RELATED STIGMA (PAPER III)

The stigma experienced by health workers may be organised around several themes: i) Little social prestige associated with HIV work; ii) Fear expressed by family members; ii) Feelings of being devalued within the healthcare field; and iv) Work-related stress and burnout.

Little prestige associated with HIV work

Little prestige associated with HIV work was the main response when health workers in this study were asked, 'Have you ever felt that people in society have reflected negatively on you because your job relates to PLHIV?' Study participants in the city hospital described that the general public avoids the services of the hospital because they fear infection and PLHIV.

Our hospital is famous for HIV treatment. By June, our unit will be closed and patients will be moved to the AIDS hospital. The first reason was that foreign projects are phasing out. Secondly, hospital managers have to think about how to attract patients to the hospital. People relate the hospital with HIV, so they think twice before they come here for dental care or surgery. HIV is not only a disease but also reflects dark side of society. Some infected people have bad behaviours. They sleep during the day; are awake at nights, stealing things and money.

Nurse; City hospital

Some of study interviewees stated that HIV-related work is not as attractive as other jobs in health services. Jobs that require regular contact with PLHIV are commonly considered unlucky by the general public and people in the field.

Some people including health workers don't like this job. My parent doesn't want me to work here. First, there is risk of being infected; secondly, it doesn't seem like clean work. It doesn't sound great like cardiovascular or obstetrical jobs. My friends, who are doctors in other departments, ask 'Do you have to touch these ulcerated patients? Do you have to wear two or three gloves?' According to them, HIV work is merely compulsory otherwise they would never have contact with these patients (...). Some people warn me 'Be careful or you may be infected'.

Doctor; National hospital

Additional stigma was found toward patients with HIV who use drugs, which reflected on the institutions that provide their care and also the health care workers that staff those institutions. The interviewees from the 09 Hospital mentioned protests against these patients from local people. The people complained that these patients were involved in buying and selling drugs and stealing things, and consequently made demands that the institution be relocated.

In 2003, the hospital was planned to be in another place but the people protested strongly; so the hospital has moved here. Even in this far and remote place, the people are protesting. They even came inside the hospital. They complain that patients often flee out for buying, selling drugs and stealing things, which cause the loss of order and security in the area. They want the hospital to be moved out. Not only patients but also doctors are facing the hardships.

Doctor; 09 Hospital

Fear expressed by family members

Health workers described their families' main concerns as related to fear of infection as well as fear of drug users themselves.

I have been working here since 2005 when I graduated from university. My family did not agree but I decided. To be frank, I was very enthusiastic. My father was so upset. He said HIV is related to drug users. My husband did not want it either. He keeps insisting that I quit and stay home. He said my work is dangerous. He is afraid that I will be infected with tuberculosis or HIV.

Nurse; 09 Hospital

Some staff families were concerned about health workers' daily interactions with drug users or sex workers in their work. These families asked the staff to find other jobs.

My family worries because the detainees here belong to the so-called "social evils" groups. The family must be very scared if they meet these people in the society, but I don't and I still work well here. My family wants me to find a safer job and have more time for them. But it is not easy to find jobs.

Nurse; 05/06 Centre

Working in the field of HIV was described as a barrier in some aspects of social life. One doctor described a family that did not want their son to get married to one of his staff members.

I often joke with my staff that it is difficult for them to get married here (laughs). It is true to some extent. Two years ago, I knew a girl. She and her boyfriend loved each other but she did not tell his family that she works in the AIDS hospital. When the wedding was ready, the parents-in-law learned about her job. They forced the boy to say goodbye. Yes, forced him to say goodbye and finally he did. So in this hospital, not only me, many couples are both working here. Sometimes we joke "the staff could not find partners outside so they got married to one another" (laughs)

Doctor; 09 Hospital

Feelings of being devalued within the healthcare field

Interviewees reported that doctors feel a lack of professional respect when they meet with colleagues.

Sometimes in meetings I meet my friends and colleagues; when we shake hands they ask 'Where do you work?' 'In the AIDS hospital' I answer. They suddenly stop talking for a while. It seems they feel sorry for me. Really sorry; one person even made a joke 'Oh then, I never want to have a chance to use your services'. My social relations become limited. My work is hard but not appreciated.

Doctor; 09 Hospital

The health workers described interactions with others in society, as well as those from other departments within their facilities, as making them feel devalued in relation to their work with patients with HIV.

Actually, it might be that that they don't intend to discriminate against me, but some people, due to limited knowledge about the infection, they have such exaggerated behaviours. They feel sorry for me and they intend to keep distances. They do not want to be close with me. That is my feeling.

Doctor; 09 Hospital

The interviewees also reported the reluctance of colleagues from other departments to care for patients with HIV infection. The desire to avoid physical or other types of contact is exemplified by the following statements:

Many staff in other departments hold their noses and run as fast as possible when they pass by our unit. They even avoid going through the door close to our unit, choosing other entries.

Nurse; City hospital

Referring patients to other national hospitals:

If the patient is pregnant, the obstetric department here doesn't want to handle (the case). They said the patient should be sent to central obstetrics hospital. The departments do not say they refuse the patients because of HIV but they said because of this the case is beyond their capacity. Then we have to refer the patients to other hospitals. Actually, they did not refuse but give many reasons such as 'this case exceeds professional capabilities' or that it 'doesn't need intervention'.

Nurse; National hospital

Work-related stress and burnout

Care for patients with HIV was described as very stressful work by nearly all of those interviewed. Some interviewees stated that this was related to lack of supplies to reduce infection risk in the work setting, such as improper personnel protective equipment or due to the heavy workload with a very difficult patient population. One nurse expressed her wish to quit in relation to the stress that this caused her.

I have been working here since 1995. I am the head of nursing. I am overloaded with work. Sometime, my unit has to take care of 20 patients but there is only one nurse. It is so hard. The AIDS patients are severe; especially the ones with abscesses, so much blood and discharge. It is terrible when I have to change the bandages (…) Many patients have candida, tuberculosis and scabies (…) And you see protective measures are poor (…) There are high risks of getting tuberculosis here and the simple masks we wear cannot prevent this (…) They still inject drugs here (…) Only my husband knows that I work here because I don't talk much about my work to others in the family. Actually, it is better if I do not have to take care of these patients (smile). We are assigned to do these tasks. If I could choose to take care of HIV patients with an extra allowance of 50% salary or care of normal patients without any allowance, I will choose the latter.

Nurse; National hospital

All the interviewees from 05/06 Centres described their work situation as being very special because their patients are detained drug users or sex workers. These health workers in particular talked about work-related stress. This was mostly described as being related to their work as health workers and guards to control detainees who often have criminal records.

The difficulty is stress and burnt out. They are drug users; 70-80% has criminal records. The staff are very stressed because they have to provide health care and fulfil the duties of guards. The latter is related to the enforcement of regulations. For example, I will have trouble if someone escapes or something like fighting or injuries happen during my work shift. Such a stressful job!

Nurse; 05/06 Centre

Some detainees have aggressive and strange behaviours because of the effects of drug withdrawal and due to long isolation from society and family. Other detainees pretend madness. They take off clothes, talking, cursing and laughing all day long. The purpose is to be sent to hospitals outside and meet their families. Some detainees even cut and hurt themselves. They use knife to rip their own bowels open; cut their vein, hands, swallow razor blades and screws. If the wound is too deep and project the viscera, we send the patient to hospital. You see; they break a Coca Cola bottle, and then thrust it into the stomach. Later on I ask them why they did that; they say it is due to family problems: No one visits them; their wives want to divorce, and so on. We have to watch them 24 hours per day.

Doctor; 05/06 Centre

Some 06 Centres have both male and female detainees, which created more problems for the centre management, as described by the study interviewees. The staff described having to control and prevent any possible close relationship between these detainees. Staff working in 05/06 Centres also mentioned needing to escort patients to hospitals for treatment in case they were very sick with an opportunistic infection. The staff reported being required to stay with the patient at the hospital to ensure that they did not escape. The staff said this as making them feel tired and stretched.

4.4. KNOWLEDGE OF HEALTH WORKERS ABOUT HIV (PAPER IV)

The health workers showed strengths in some domains of knowledge but were weaker in others (Table 6). Knowledge about HIV epidemiology, prevention and treatment appeared to be sufficient. In contrast though, participants demonstrated a low level of understanding on positive confirmatory tests (8%), role of voluntary counselling and testing (mean=1.48, range=0-2). Another area of deficiency was knowledge about palliative and nutrition cares for PLHIV. Knowledge levels were low in regards to identifying pain level (12 %), starting time for palliative care (8%), and types of palliative care (mean=0.84, range=0-2). In regards to nutrition, though participants know about food groups needed for the patients (mean=2.23, range=1-3), but only 20% understand that increased nutrition is necessary. The participants demonstrated a comparatively good understanding of negative effects of stigma and discrimination on PLHIV (mean=3.16, range=3-4), their families (mean=2.90, range=2-4), and community (mean=2.32, range=2-3).

Despite this, knowledge about stigma (19 %) and discrimination (13%) remained modest. The multivariable linear regression analysis showed that health workers, who do not support the isolation and separation of PLHIV and who have positive attitude to PLHIV, have better knowledge about stigma and discrimination. This study demonstrates that besides basic knowledge about HIV, priorities should be given to training for health workers on stigma and discrimination reduction as well as on palliative care and nutrition.

Table 5 displays the general characteristics of the sample. The majority of the participants were aged 30–49 years (52%), working in Ha Noi (56%) and medical university graduates (47%). Most were working at the provincial level (94%), in hospitals (77%), in clinical settings (71%). Two-thirds had been working less than 20 years; one-third had been working less than ten years.

Table 5: General characteristics of study participants

	Characteristics (N=610)	N (%)
Province	Ha Noi	334 (56.4)
	Quang Ninh	149 (24.4)
	Dien Bien	117 (19.2)
Age	<30	119 (19.5)
	30-39	318 (52.1)
	≥40	173 (28.4)
Sex	Male	320 (52.5)
	Female	290 (47.5)
Highest education level	PhD or Master	112 (18.4)
	1st degree specialist	166 (27.2)
	2nd degree specialist	48 (7.9)
	University	284 (46.5)
Working years in health sector	<10	190 (33.7)
	10-19	170 (30.2)
	20-29	152 (27.0)
	≥30+	51 (9.1)
Level of health facility	Province	576 (94.4)
	District	34 (5.6)
Type of health facility	HIV/AIDS center	13 (2.1)
	Other public health centers	127 (20.8)
	Hospitals	470 (77.1)
Area of specialization	Preventive medicine including HIV	105 (17.4)
	Public healthcare	33 (5.5)
	Clinical healthcare	426 (70.8)
	Para-clinical or laboratory	38 (6.3)
Current working area	Preventive medicine including HIV	72 (11.8)
	Public healthcare	37 (6.1)
	Clinical healthcare	450 (73.8)
	Para-clinical or laboratory	51 (8.3)

Table 6: Knowledge about HIV

Domains of knowledge (N = 610)	Mean	Median	SD	Interquartile (25%-75%)	N (%)
HIV epidemiology					
Transmission routes	5.29	5	1.29	(4-6)	
Mother-to-child transmission	2.06	2	1.12	(1-3)	
Populations with high transmission	6.90	7	0.80	(1-7)	
Body fluids and secretions of high virus concentration	3.81	4	0.89	(3-4)	
Survival time of virus outside the body¶					67 (10.98)
Target cells (T_{CD4}) of HIV infection and depletion¶					366 (60)
How HIV virus affects T_{CD4} lymphocytes¶					174(28.52)
Progression of the phases of AIDS in human body	1.81	2	0.43	(0-3)	
HIV prevention					
Prevention methods	1.76	2	0.98	(1-3)	
Positive confirmatory tests¶					49 (8.0)
Vaccines available for prevention¶					529 (86.72)
Circumstances of occupational exposure	1.63	2	0.94	(1-3)	
Handling occupational exposure	2.28	2	1.67	(1-3)	
Post-exposure antiretroviral treatment (ART)					508 (53.28)
Harm reduction activities	5.97	6	0.83	(1-6)	
Role of voluntary counselling and testing	1.48	1	1.33	(0-2)	
Stages of voluntary counselling and testing	3.06	3	0.96	(2-4)	
HIV care and treatment					
Medications for preventive treatment of opportunistic infections	0.91	4	1.01	(1-4)	
Characteristic symptoms of AIDS patients	1.57	5	1.28	(4-6)	
Common symptoms of patients for ART¶					131 (21.48)
Current medications for ART in Vietnam	0.54	1	0.53	(0-1)	
Main cause of antiretroviral drug resistance¶					364 (59.67)
Enhancement of treatment adherence	0.76	2	1.21	(1-3)	

¶ Items or questions that have only one option of answer

Table 6: Knowledge about HIV (continued)

Domains of knowledge (N = 610)	Mean	Median	SD	Interquartile (25%-75%)	N (%)
Drug and methadone maintenance therapy					
Characteristics of drug dependency	0.91	1	1.01	(0-1)	
Main symptoms of heroin withdrawal syndrome	1.57	1	1.28	(1-2)	
Causes of heroin withdrawal syndrome¶					294 (48.20)
Start of heroin withdrawal syndrome¶					176 (28.85)
Methadone therapy¶					155 (25.41)
Benefits of methadone maintenance therapy	0.76	0	1.21	(0-1)	
Administration route for methadone intake¶					286 (46.89)
Palliative care and nutrition					
Types of palliative care	0.84	0	1.11	(0-2)	
Main palliative care activities	0.96	0	1.22	(0-2)	
Starting time for palliative care¶					49 (8.03)
Identifying patients' pain level¶					74 (12.13)
Prescribing pain relief medication	3.07	3			
Depression as a common sign¶					6 (0.98)
Benefits of palliative care	0.74	0	0.99	(0-1)	
Reasons for increased nutrition needs					
Body's needs for increased nutrition¶					125 (20.49)
Increased need to fight diseases¶					368 (60.33)
Food groups needed	2.23	2	1.57	(1-3)	
HIV-related stigma and discrimination (S&D)					
Definition of stigma¶					114 (18.69)
Definition of discrimination¶					78 (12.79)
Signs of discrimination	4.51	5	1.80	(3-6)	
Main causes of S&D	2.45	3	1.05	(2-3)	
Negative effects of S&D on PLHIV	3.16	4	1.13	(3-4)	
Negative effects of S&D on patients' families	2.90	3	1.18	(2-4)	
Negative effects of S&D on community/society	2.32	3	0.85	(2-3)	

¶ Items or questions that have only one option of answer

Table 7 provides results of multivariable linear regression analysis with health workers' knowledge about HIV-related stigma and discrimination. The knowledge is affected by four factors: geographical area; number of years working in the health sector; attitude of not support the separation and isolation of PLWH, and positive attitude to PLHIV. The health workers in urban (Ha Noi) or coastal area (Quang Ninh) have better knowledge than the ones in mountainous area (Dien Bien) (P <0.001). Notably, the participants who have higher number of year working in the health sector, have lower level of knowledge (P <0.01). The health workers, who don't support separation and isolation of PLHIV, who have positive attitude towards PLHIV, then have a higher level of knowledge about stigma and discrimination (P <0.05 and P <0.01 respectively). This model can account for 10% of the total variance in the dependent variable.

Table 7: Multivariable linear regression analysis on factors affecting knowledge on HIV stigma and discrimination

Independent variables (n=450)	**Model on knowledge**
	Stigma and discrimination (β coefficient)
Demographic and socio-economic characteristics	
Age	†
Sex Male	-0.07
Marital status	†
Ha Noi	Reference
Quang Ninh	-0.07
Dien Bien	-0.16***
Income	†
Family member working on HIV	†
Contacts with most-at risk population (PLHIV/drug users/sex workers/gay)	†
Education level	†
Working years in health sector	-0.15**
Trained on MMT	†
Trained on HIV	-0.04
Past working area	
Preventive medicine including HIV	Reference
Other public health areas	-0.06
Clinical	0.01
Para-clinical	0.03
Current working area	
Preventive medicine including HIV	Reference
Clinical	-0.04
Other public health areas	0.06
Para-clinical	0.02
Seniority	0.02
Not support separation and isolation of PLHIV	0.12*
Positive attitude to PLHIV	0.13**
Coefficients of the model	
R^2 (adjusted coefficient)	10%
df	18
F-test (appropriateness of the models)	3.19***

*β= standardized regression coefficient; R^2=% variance in the dependent variable of the model; †excluded from models due to no statistical or theoretical significance; *P<0.05; **P<0.01; ***P<0.001; Value (-): Negative regression coefficient indicates negative association. Value (+): Positive regression coefficient indicates positive association*

Table 8 shows percentages of the study participants in trainings by topic and socio-demographic characteristics. At least 50% of participants have attended training about HIV epidemiology, virology, immunology and treatment of opportunistic infections for PLHIV. About 40% have been trained on voluntary counselling and testing, prevention of mother-to-child transmission, and behaviour change education. Lest trained topics were methadone maintenance therapy, palliative care and nutrition, and treatment.

The health staff working in HIV/AIDS centres had been trained most follows by those in other public health centres and the last were staff in the hospitals. The lowest numbers of training topics per person were found among staff working at the district level and in hospitals. Even in topics relating to treatment, hospital staff were less trained, for example, participation in ART in adults (28%), ART in children (17%); palliative care (26%) and nutrition (31%). Training in methadone maintenance therapy had the lowest training rates, even among those working in the preventive areas such as in provincial HIV/AIDS centres (38%), preventive medicine centres (12%), and with health education (6%).

Table 8: Participation (%) in HIV training

Topics 1) HIV epidemiology; 2) HIV virology; 3) HIV immunology; 4) ART in adults; 5) ART in children; 6) Treatment of opportunistic infection; 7) Palliative care; 8) Methadone maintenance therapy; 9) Voluntary counselling & testing; 10) Prevention of mother to child transmission; 11) Behaviour change education; 12) Nutrition for PLHIV; 13) National programs on HIV.

	Topic 1	**Topic 2**	**Topic 3**	**Topic 4**	**Topic 5**	**Topic 6**	**Topic 7**	**Topic 8**	**Topic 9**	**Topic 10**	**Topic 11**	**Topic 12**	**Topic 13**
Province													
Ha Noi	68	67	60	32	21	52	24	9	47	50	56	26	29
Quang Ninh	69	68	61	34	17	55	28	11	58	50	57	33	33
Dien Bien	50	53	48	21	12	44	19	6	34	44	43	26	33
Age													
<30	65	67	65	36	19	54	26	13	47	48	55	28	28
30-39	64	64	58	27	17	52	25	9	48	50	53	28	30
40-49	65	64	53	33	20	46	21	7	46	49	54	28	35
Sex													
Male	68	66	60	30	19	53	25	10	46	46	53	27	33
Female	61	63	56	31	17	49	22	8	49	52	55	29	28
Level of education													
PhD and master	72	68	63	41	3	57	27	10	54	54	57	33	36
1st degree specialist	62	66	60	32	17	49	25	7	46	51	54	28	29
2nd degree specialist	77	71	62	25	19	58	17	21	54	50	62	27	33
Graduates	61	62	54	26	17	49	23	8	44	46	51	26	29
Working years in health													
<10	66	65	63	26	14	49	23	9	45	46	52	23	24
10-19	61	62	52	32	16	46	18	8	42	45	49	23	31
20-29	66	64	56	30	20	53	30	9	48	51	56	34	35
40^{+}	57	59	55	35	16	57	23	14	61	57	55	37	39
Level of health facility													
Province	65	64	57	30	18	51	24	10	47	48	53	27	30
District	62	71	62	29	9	53	23	6	44	47	59	26	29
Type of health facility													
HIV/AIDS center	100	100	77	92	77	92	61	38	92	77	92	54	69
Other public health center	64	68	61	34	17	42	13	10	52	54	53	28	31
Hospital	64	63	56	28	17	52	26	8	45	47	53	27	30
Specialization													
Preventive medicine	62	61	54	27	16	42	17	12	38	44	41	15	25
Health education	67	67	70	30	9	54	18	6	45	45	48	24	30
Clinical	65	65	58	32	20	53	26	9	50	51	58	31	32
Para Clinical or laboratory	66	63	50	24	16	50	24	10	42	37	45	26	26

5 DISCUSSION

Summary of main findings

- During the last two decades, Vietnam's HIV policy has evolved from punitive control measures to a more rights-based approach such as harm reduction interventions and health insurance eligibility for HIV patients' medical costs. The policy-making process was driven in a top-down way, controlled mainly by central state institutions with limited and passive involvements from the provinces, civil society and people living with HIV.
- HIV work is perceived by Vietnamese health workers as having both positive and negative aspects. Factors relating to job satisfaction included training opportunities, social recognition, and meaningful tasks. Factors relating to job dissatisfaction included unsatisfactory compensation, lack of positive feedback and support from supervisors, work-related stress, fear of infection, and HIV-related stigma because of association with PLHIV.
- Stigma experienced by health workers because of association with PLHIV can be organised around several themes: i) Little professional prestige associated with HIV work; ii) Fear expressed by family members; iii) Feelings of being devalued within the healthcare field; and iv) Work-related stress and burnout, especially for staff working in detention centres for drug users and female sex workers.
- Health workers' knowledge about HIV epidemiology, prevention and treatment appeared to be adequate. However, participants demonstrated a low level of understanding of the purpose of HIV confirmatory tests, the role of voluntary counselling and testing. Another area of deficiency was knowledge about palliative and nutrition cares for PLHIV.
- The participants demonstrated a comparatively good understanding of the negative effects of stigma and discrimination towards PLHIV, their families, and communities. Despite this, knowledge about stigma and discrimination remained modest. The multivariable linear regression analysis showed that health workers, who do not support the isolation and separation of PLHIV and who have positive attitude to PLHIV, have better knowledge about stigma and discrimination.

5.1. DEVELOPMENT OF HIV-RELATED POLICY IN VIETNAM (PAPER I)

HIV-related policy formulation

Unlike in more pluralist states, where positive changes often come from below, often from advocacy groups, the changes in Vietnam in societal attitudes to the HIV epidemic have largely reflected and been driven by top-down changes in policies. The focus in the early 1990s on control measures by enforcement forces such as police, investigation and courts, has evolved over time to more social and technical solutions, mainly carried out by health and social workers, and, increasingly, peer support from PLHIV .

During the last two decades, developments in HIV policy in Vietnam was driven in a top-down way by the state organs, with support and resources coming from international agencies. The

earlier responses to HIV control policies, which were characterised by control and punitive measures, were replaced by more supportive and rights-based actions such as the implementation of harm reduction and health insurance for HIV-positive persons. These changes are in line with the optimal and most effective approaches to HIV response in other countries.

There are several reasons to explain the HIV policy changes in Vietnam during the period. First, the Party, National Assembly and the Government demonstrated enhanced political commitment and leadership in the area of HIV over time, likely as leaders realised that HIV was a potential threat to people's health and life as well as the nation's development. Second, more accurate HIV information was provided to the public that started to influence society's views and norms, as well as policy. Third, a scientific evidence-based approach was used to inform policy making, and this made the introduction of measures such as harm reduction reasonable on scientific rather than moral grounds.

The policy making process, as described by many key informants, was a top-down approach, through predetermined steps that were structured by Vietnam's administrative system. The process was not characterised by intensive discussions in society or at parliamentary level, as is often seen in more pluralistic countries [78, 81]. The policy making process was therefore driven by government institutions, with little or no involvement of local authorities and civil society organisations. This contrasts with studies from more pluralistic countries with a longer history of democracy which have shown the active involvement of non-governmental organisations and sometimes PLHIV in policy formulation and implementation [78, 81, 82].

Our study, firstly, throws some light on the importance of the Communist Party in the HIV policy making process, in that it was central to precipitating change in other state institutions such as the National Assembly and the Government. In a country with one ruling political party like Vietnam, policies are strictly developed based on directions given by the ruling Communist Party. This is common practice in countries with similar political systems such as China [83], the former Soviet Union [84]. In Cuba, the state applied a policy of coercive HIV testing for all pregnant women and for people with sexual transmitted diseases [85]. Those requiring antiretroviral treatment were required to attend a six week quarantine programme called "Living with HIV" in closed sanatoria [86]. Despite complaints about violating human rights in regards to this aggressive testing, sexual contact tracing, Cuba has the lowest HIV prevalence in the Caribbean region [87].

While the organs of power can appear to be like a 'black box' under communist political systems, the interviews suggest that individuals within the Party, the Government, and the Ministry of Health, played a role in bringing about changes in attitudes that led to policy change. There was also evidence of at least one 'policy champion' who worked on drafting the National Strategy for HIV which was published in 2004 and then moved to work within the Party Commission, which issued Directives which changed the course of the country's response to HIV in 2005.

International agencies have played an important role in Vietnam in supporting the national HIV response: their financial assistance increased from US$ 8 million in 2002-04 to US$ 52 million in 2006, representing 80-90% of total HIV funding [88]. The support is used for HIV

prevention, treatment and care as well as for surveys, studies, and workshops which marshal the evidence for policy development [89].

HIV-related policy implementation

Several factors account for obstacles in implementation of HIV-related policies in Vietnam: The need for improved salaries and more training opportunities for health staff; but strategies to improve staff work morale by valuing their work could help considerably to improve their work motivation. In order to meet the requirements of scale-up of antiretroviral therapy (ART) and to solve the problems of shortages of health staff, some countries apply 'task-shifting', the delegation of medical and health services responsibilities from higher to lower cadres of health staff [90] [91, 92]. Other countries promote involvement of PLWH in care of other patients [81, 82], and Vietnam has gone toward a policy of implementing similar strategies for HIV prevention and care.

Contributions and implications

Paper I conducted a policy document review and key informant interviews using Walt and Gilson's (1994) Health Policy Triangle Framework [52] to analyze the developments of HIV policies in Vietnam. The Paper demonstrated that such health policy analysis approaches can be applied not only in pluralistic societies but also in traditional one party state like Vietnam. The study showed similar policy changes take place, as those found in pluralistic societies, but through more top-down and somewhat hidden processes. Enhanced participation of other actors, like civil society in the policy making process, is likely to contribute to policy formulation and implementation that meets the diverse needs and concerns of people. The paper also considers implementation issues, especially barriers due to health human resource shortage.

Limitations

The main difficulty in this study was in getting senior policy makers to agree to be formally interviewed, which is a common problem in policy studies that seek to record the views of civil servants. This was reflected in the short time allowed for interviews (as short as 30 to 45 minutes with some informants); and their generally cautious approach to answering questions. These made it difficult to get in-depth information on the roles of actors, how decisions were taken and how policy turning points took place. These difficulties have been encountered in other policy analysis studies [67]. Sampling biases were not only likely; they were inevitable, in a context where tradition dictated non-disclosure as the norm. It is likely that those actors who were favourable to the policy changes and who played (or saw themselves as playing) a role in the policy change process were more willing to be interviewed.

These key informant interviews can be considered as elite interviews. According to Kvale (2007) obtaining access to these powerful people is a key problem. Elites are used to being asked about their opinions and thoughts. However, elite interviewees tend to have a secure status, where it may be feasible to challenge their statements, with the provocations possibly leading to new insights [51].

5.2. JOB SATISFACTION OF HEALTH WORKERS (PAPER II)

Unsatisfactory compensation

A theme of unsatisfactory compensation emerged when discussing job dissatisfaction with the participants. This theme includes low salaries, limited additional income-generating opportunities, differences in pay between project staff and government payroll positions, and the uneven distribution of benefits. Pay plays an important role in job satisfaction theories. According to Herzberg, pay belongs to the hygienic factor group that does not provide positive satisfaction, but results in dissatisfaction when absent [61]. In Maslow's theory, pay helps individuals meet their physiological needs [93]. Similarly, Spector points out that the correlation between pay and job satisfaction tends to be surprisingly small, which suggests that pay itself is not a strong factor in job satisfaction; however, pay fairness can be a very important factor [53]. Similarly, a study by Songstad et al. of health workers in a rural district in Tanzania showed that unfairness in salary level, allocation of allowances, promotions, access to training, and upgrading reduced staff motivation, affecting their work performance [94]. The participants in their study were concerned that people in the same jobs earned more money because they were involved in projects that were funded by international organizations. Salary and benefits are taken for granted, but could be critical if they are not competitive with others' [95].

Weak supervision

Participants mentioned dissatisfaction related to organizational factors, particularly the lack of positive feedback and poor rewards from supervisors. Furthermore, participants viewed supervision as an act of control. Feeling neglected by supervisors had a strong demotivating effect. Apart from more supervision, participants desired more instruction and needs-oriented supervision, which would provide direct and timely feedback. Herzberg argued that weak supervision can lead to dissatisfaction [61]. Supervision is one of the factors in Spector's JSS [53]. The WHO strongly argues for good quality supervision, noting that "supervision that is supportive and helps to solve specific problems can improve performance, job satisfaction and motivation" [28].

Work-related stress and burnout

Other studies have confirmed the findings that HIV work is stressful [14, 18, 96, 97]. The causes of stress are workload [18, 96, 97], fear of infection [14, 16, 98], dealing with drug users, and little support from colleagues [14, 20]. Workload has been perceived by health workers as having both mental and physical aspects; e.g., the level of difficulty and the amount of work they must do [53].

The increasing workload associated with the growing number of HIV cases was one of the major concerns of health workers in this study. Raviola et al. found that high workloads caused stress, low self-efficacy, fatigue, and frustration in staff [97]. Kalichman et al. [99] found that work-related stressors could be divided into workplace-related and patient-care-related stress, the latter of which is responsible for most stressful events. Their study found that job stress originated from the demanding work of taking care of patients, but that some part of this stress was because of the fear of infection transmission and social stigma.

Some participants in the present study mentioned HIV as a serious occupational hazard, while others recognized exposure to tuberculosis as a more potent threat. Previous studies have shown that "irrational fears" of contracting infections resulted in stress and higher perception of risk among health workers [14, 18]; however, this fear did not appear to result in compliance with safety measures [18]. In the present study participants mentioned, that fear of infection was an issue for young and inexperienced employees in particular, which was confirmed by another study based in Vietnam [64].

Fear of infection has also been identified as the main factor contributing to the 'reluctance' of colleagues from other departments to collaborate with HIV service workers to provide care and treatment for PLHIV [6, 18, 100]. Another study found that health workers did not have a regular supply of disposable gloves and antiretroviral drugs for post-accident treatment, which resulted in higher levels of stress [97]. With better access to preventive measures health workers perceive themselves to be better protected and more comfortable at work [16]. Therefore, WHO (2011) recommends comprehensive infection-control strategies and procedures including standard precautions [26].

According to Maslow, safety is the second fundamental need after physiological needs and includes health and well-being [93]. According to Herzberg's theory, safety belongs to the hygienic factor group that does not provide positive satisfaction, but results in dissatisfaction when it is absent [61]. Spector found that high job stress and burnout levels are associated with greater intention to leave a job [53]. Stress can also result in behavioural reactions (e.g., quitting a job), physical reactions (e.g., hypertension), and psychological reactions (e.g., frustration) [53]. Li et al. provided evidence that institutional support is important to promote a positive psychological state and to prevent burnout and departure from the workforce [16].

HIV-related stigma

The study identified three different categories related to stigma based on the source and target of stigmatization: i) stigma toward key populations at risks in society, ii) stigmatization of patients with HIV-related illnesses, and iii) stigma experienced by health workers originating from society, colleagues, and families. The third category of stigma is recognized as "associated stigma" [101], or "perceived stigma" that includes both stigma health workers create and the stigma they experience as a result of their work [21].

Consistent with other studies, we show that health workers are influenced by common negative attitudes associated with drug users and sex workers [18, 19, 102]. As part of society, health workers are understandably influenced by societal norms, attitudes [16], and prejudices [18]. Therefore, we conclude that stigma towards this profession has a negative impact on employees' perception of their work, and ultimately their job satisfaction. Several studies have highlighted considerable reluctance in significant proportions of health staff that would prefer not to work with HIV-positive patients if given the choice [13, 14, 18, 98]. Fear of infection is a significant contributing factor to this reluctance [14, 18, 19, 98].

In the present study, "social evils" and HIV as a punishment for practicing socially unacceptable behaviours were attitudes that came up in the interviews and discussion groups. The "social evils" attitude is unique to the Vietnamese context and refers to sex work and drug use. "Social evils" and HIV have been closely related since the beginning of the epidemic because the main government priority was to reduce the spread of the infection by combating

sex work and drug use [103]. In a study on stigma and discrimination toward HIV-positive patients in health facilities in Vietnam, Khuat et al. conceptualized, i) HIV fear-based stigma; i.e., fear of casual transmission and related stigmatizing attitudes led health workers to treat these patients differently, and ii) HIV value-based stigma because of negative values / social judgments and associations among HIV and certain behaviours and groups, such as sex workers and injection drug users [19].

We conclude that such attitudes are common in Vietnamese and other contexts and are shared by many other people, including health workers. Stigma has been found to have a significant negative influence on the level of job satisfaction [21, 104]. A study in China showed that health workers who observed a higher level of discrimination against PLHIV in society were more likely to report being a victim of stigmatization and discrimination. This suggests that social norms and environment play an important role in forming these attitudes towards health workers. This finding also implies that stigma reduction is essential to promoting a higher quality of care [16].

A study in five African countries identified perceived stigma as the strongest predictor of job dissatisfaction leading to nurses' intending to migrate to other countries [21]. Health workers in South Africa reported feeling a lack of professional respect, were labelled as incompetent by other (non-HIV) doctors, and lacked recognition from the public for the 'good and stressful job' that they do, thus "creating an impetus to leave the HIV work" [15]. Therefore, stigma may contribute to the health workforce shortage in HIV service organizations, which suggests that strategies are necessary to improve retention [9] and job satisfaction [21].

Job satisfaction is more commonly explained by factors such as salaries, working conditions, availability of supplies, and opportunities for advancement. The present study demonstrates that job dissatisfaction is partly due to stigma. The study suggests that stigma reduction among health workers and society as a whole will improve job satisfaction. Immediate actions could be the provision of more information such as education and communication provided in mass media to improve the public image of HIV services, as well as improvement of work safety, therefore making health workers working in the area feel that their work is valued and safe.

Motivation factors

This study revealed some interesting findings regarding the nature of work within AIDS service organizations, suggesting that this is potentially satisfying work. Participants were motivated to work in this area because of its humanitarian nature, their sympathy for others, their eagerness to help, and the encouragement they received from society. They were internally motivated to do this work because it brings them pleasure. This motivation is conceptualized as intrinsic motivation [60, 105, 106]. Previous studies partially confirm this finding and add that positive feelings of health workers are related to their ability to help and care for stigmatized people [18]. These feelings reduce the negative effects of stress and burnout [107]. Maslow argued that after the physiological and safety needs, it is necessary to obtain feelings of love and belonging [93].

We found that participants value contingent rewards such as appreciation and recognition from the organization and society. According to Herzberg, social recognition is one of the motivators that give people positive satisfaction [60, 61]. Some studies have also attempted to identify the rewards that health workers receive in caring for PLHIV [18, 107]. The positive outcomes

reported by nurses included the ability to help, interactions with patients, and admiration for patients' courage [18]. Breault and Polifroni conducted interviews with nurses and identified the following rewarding outcomes: making patients comfortable, seeing a patient go home, and helping a patient die with dignity. They obtained satisfaction from providing what they believed was non-judgmental care to stigmatized people [108].

Health workers in a study by Nashman et al. (cited in Horsman 1995) said that providing comfort and support was satisfying. Educating patients, staff, and others was also a major source of satisfaction and self-gratification (i.e., "knowing I am doing well") [18]. Nurses interviewed by Reutter and Northcott said their work was enjoyable and worthwhile because of the relationships they developed with their patients [109]. Nurses also received feedback from patients and their families that assured them their work was valued [18].

All participants in the present study mentioned training opportunities as an important motivator. Training enables health workers to aspire to more demanding duties and positions and to achieve their professional advancement goals. Participants also appreciate the annual rewards and positive feedback from supervisors. Titles such as "Best Employee" are viewed as positive experiences because they come along with monetary rewards and provide the possibility of promotion. This motivation is conceptualized as extrinsic motivation [60, 105, 106].

The study by Goetz et al. on job satisfaction with dentists in Germany showed that both intrinsic and extrinsic factors are important in determining the perception of job satisfaction, while the presence of internal-motivational factors such as opportunity to use abilities and recognition for work have the most positive impact on job satisfaction [60]. This feeling of satisfaction is supported by concepts such as esteem, self-actualization, and self-transcendence in Maslow's theory [93]. Similarly, growth, learning, and advancement are considered motivators that lead to satisfaction in Herzberg's motivation-hygiene theory. Sicsic et al., examining the relationships between intrinsic and extrinsic motivators among French general practitioners in the pay-for-performance model, reported the potential side effects of the model with the erosion of intrinsic motivation by extrinsic rewards [106].

Contributions and implications

Paper II has applied a hybrid approach of theory-driven and data-driven coding and theme development for data analysis with a previously established list of theoretical categories derived from Spector's Job Satisfaction Survey (JSS). The Paper has found that stigma experienced by health workers because of association with PLHIV and concerns on workplace safety are two specific factors to HIV work. The Paper suggests an adjusted Spector's model of the job satisfaction of HIV service health workers in Vietnam (Figure 11). Although presented separately in this model, the components are closely related to each other and often work together to influence employee job satisfaction. Each component could become a target for intervention. For example, actions could be taken to improve work safety and to enhance motivation factors so that health workers would feel their work is safe and appreciated by the society.

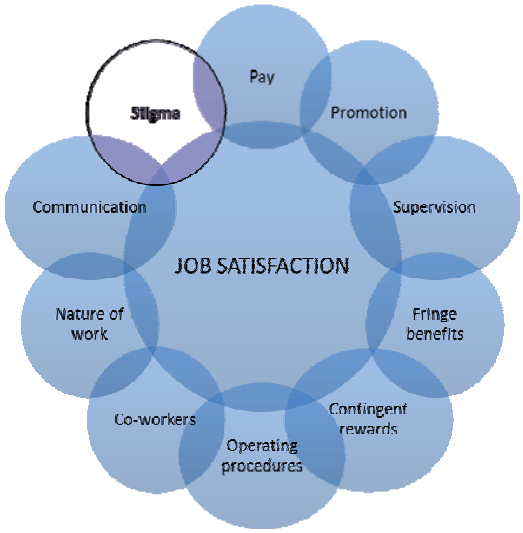


Figure 11: Adjusted Spectors' job satisfaction model of health workers in HIV service organisations

Limitations

This study has limitations with regards to the research design and the sample. In terms of the design, this qualitative study could not provide an overall score of job satisfaction as well as the weight of each factor to score. The sample was purposively selected, and we could not demonstrate that it was representative of the health workers in Vietnam. It is also important to note that the study participants may have used the interviews and focus group discussions as an opportunity to raise their concerns, and so data on promoting factors may have been less forthcoming than data on factors causing dissatisfaction.

Another limitation of this study was that only health workers in public sector were selected for group discussions and interviews. Finally, many of the study participants have expressed concerns of getting infection of TB in their workplaces. More attention should be paid to this issue in the future research.

Lesson learnt

To create a comfortable and productive discussion, it was necessary to consider how can best to create an atmosphere that would increase the participants' wiliness to talk. The advantages of homogenous groups have often been underscored both to meet the need for focusing the discussion and to ease the situation for the participants [110].

The role and skills of the moderator are crucial. It is his/her role to focus the discussion, to encourage people to talk, to allow everybody to be heard and to ask for elaboration of the questions under focus [110].

5.3. IMPACTS OF HIV-RELATED STIGMA (PAPER III)

Little social prestige associated with HIV work

In Vietnamese society, doctors and teachers are called '*Masters'* by the people and great respect is afforded to persons in these professions. However, this study showed that health workers perceive that their work is less valued due to the stigma which comes from close association with PLHIV and people who use drugs. This may explain why it is difficult to recruit health workers for the work directly related to the treatment and care of PLHIV in Vietnam [111, 112]. In Vietnam, as elsewhere, many persons in society hold the belief that persons became infected through drug use or sex work, which is seen as illegal and 'immoral' behaviours, and that, thus PLHIV are guilty and deserve their infection. Additionally, some people in society do not understand basic facts about how HIV is transmitted and are thus more worried about 'accidental' transmission through casual contact. Psycho-social support and expressions of appreciation may also help retain the healthcare workforce and their sense of commitment [15].

Our study results are similar to those from other countries which describe stigma by association [9, 15]. A study on consequences of caring for HIV patients in China reported similar feelings of being stigmatized and discriminated among health care providers [22]. The findings of the present study are also in line with the Horizons Program's Framework that HIV/AIDS-related stigma & discrimination is reinforced by the pre-existing stigma in society in regard to sexuality and drug use. Therefore, interventions which focus on rights-based approaches that take into account multiple and intertwined layers of stigma should be a high priority in order to create a transformed social climate in which stigma and discrimination are not tolerated [5]. Gupta et al. (2008) indicate that structural approaches will change social, economic, and political factors determining HIV risk and vulnerability [113]. Aggleton et al. (2012) suggest that education, as central to an effective response, should include HIV prevention, treatment and mitigation of the negative effects of the epidemic [114]. Education is needed to change the image of HIV work, which would thereby improve the status of those engaged in this work.

Fear expressed by family members

Fear of infection is the main concern raised by families of health workers caring for PLHIV. In Vietnamese families, women are usually considered to be responsible for food and taking care of the health of other family members. This may explain why family members expressed more concerns when female health workers had to deal with patients with HIV daily. A second widely held and prejudicial societal belief is that drug users and sex workers are associated with "social evils", a belief that is of concerns for individuals, including health workers, who have to meet and deal with them, daily. This finding is similar to those from studies within and beyond Asia [13, 14, 22, 115]. In this study, the concerns were described as more prominent among female health workers, who reported that they had to dispel family members' worries when applying for the posts.

Better communication and education to change societal attitudes about the people who use drugs, which communicate that drug dependence is a medical rather than a 'moral' disease in need of appropriate medical treatment, might ameliorate some of this societal stigma. Moreover, with better implementation of joint WHO-ILO-UNAIDS policy guidelines (2011) on improving health workers' access to HIV and TB prevention, treatment, care and support services, health workers and their families may feel less concerned about the risk of hospital-acquired infections.

Feelings of being devalued within the healthcare field

Participants in this study reported feeling devalued when treating the patients with HIV by the reluctance of colleagues from other departments to collaborate with them. Other studies have shown similar behaviours [14, 15, 20, 21]. Nyblade et al (2009) suggest that interventions to combat stigma in health facilities should focus on all three levels: i) Individual i.e., increasing awareness of what stigma is and the benefits of reducing it; ii) Environmental i.e., information, supplies and equipment necessary to practice universal precautions and prevent occupational transmission; and iii) Policy i.e. policies that protect safety and health of health workers [100]. Stronger adherence to WHO Health Sector Strategy on HIV/AIDS 2011-2015 that the implementation of comprehensive infection-control strategies including standard precautions and using tools reduce discriminatory attitudes among arrange of health workers towards PLHIV would also help to reduce stigma & discrimination.

Work-related stress and burnout

Stress is the main concern of the many health workers interviewed, particularly those working in 05/06 Centres. The causes of stress include a perceived 'oppressive workload' in a closed setting with drug users and sex workers as well as over involvement in custodial duties rather than medical tasks. There are very few studies about these centres in Vietnam and those performed have mainly focussed on identifying HIV prevalence among detainees [103] and prisoners [116, 117]. Some staff consider their jobs in the detention centres as temporary while waiting for better ones [118].

Here, we may conclude that there is a need for better working conditions to reduce stress for the health staff involved in such detention centres' work. Such measures include the release of health workers from the burden of responsibility for things they are not specifically trained to do, such as custodial duties. It would also be of help to review working conditions, practices and policies in order to offer a supportive environment and reduce stress [119]. However, management and mitigation of stress are difficult to achieve unless one has a clear picture of the problems. More systematic studies of stress among health workers at all levels and in closed settings are therefore needed, and more formal documentation of the different strategies used to cope with stress, how well they work, what they cost, and their effects on the quality of care as well as on staff morale and commitment.

Many critics have urged Vietnam to close the 05/06 Centres after finding that 'people detained for using drugs are held without due process for many years, denied treatment, tortured, and forced to work' [120]. While waiting for the decision of the government on 05/06 Centres, improvements need to be taken in those closed settings including better HIV prevention and treatment, promotion of human rights and the strengthening of health-related human resources. In a study on workforce professionalism in drug treatment services in the US, Wu and Hser (2010) suggest that human resources enhancement could be a valuable approach and that this should include the use of standardized client assessment tools, use of a standardized outcome evaluation system, the presence of adequate resources, and access to new technologies, and qualified staff [121].

Contributions and implications

We have attempted to articulate and visualise these impacts based on perceptions and experiences of the study participants. The study identified social distancing as the main impact of stigma on health workers. The feelings of social distancing were reported from contacts with other people in society, colleagues in the workplace, neighbours in communities, and from family members. The model may be used to identify areas for the design and testing of stigma reduction interventions. Each component could become a target for intervention. For example, work could be done to improve the public image of HIV work in Vietnam and to organise awareness campaigns in hospitals regarding the impact of stigma on the quality of care for patients.

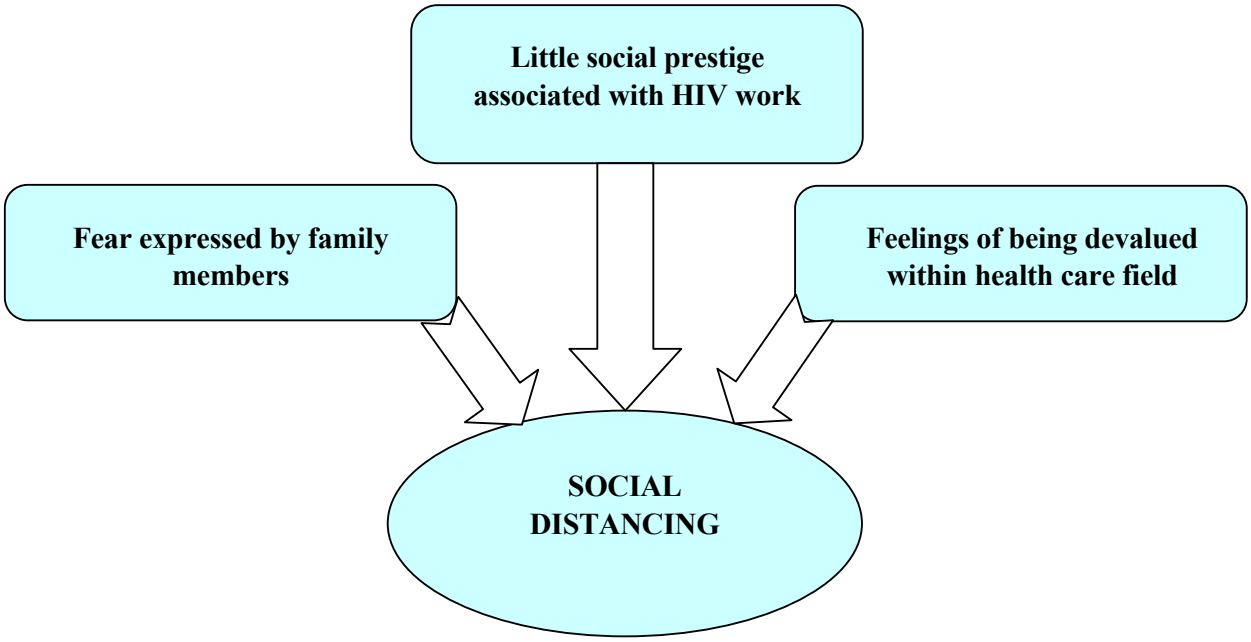


Figure 12: Conceptual model of HIV-related stigma impacts on health workers

Limitations

This study has some limitations. First, with only 14 interviews conducted in Hanoi; the findings cannot be applicable to the wider health workforce in other parts of the country. Second, due to the sensitive topic, some participants in rehabilitation centres were not open and comfortable when talking about their roles as the detention guards and their future plans when being interviewed in the centres. Perhaps, other ways of interview and better location should be arranged in the future.

5.4. HEALTH WORKERS' KNOWLEDGE ABOUT HIV (PAPER IV)

General knowledge about HIV

Although the participants, as health workers, are expected to have a good level of knowledge about topics related to HIV/AIDS, the study results indicate an incomplete understanding in many of the knowledge domains. The study participants had good level of knowledge about

basic concepts about HIV epidemiology, prevention and treatment, but only few could give correct answers to more detailed and specific questions. There are several possible reasons for this but one that is frequently found in the literature is that medical services provide more attention to treatment than to nutrition for patients. Similarly, a study by Tran et al. of Vietnamese women with HIV infection in Hanoi showed that nutrition was not considered a treatment measure. Moreover, the facts that most infected individuals have low income and unstable jobs means that they cannot afford nutritious diets, further compounding the problem [122].

Previous studies demonstrate that nutritional care is important in clinical, as well as comprehensive, care [122-124]. The challenge is how to apply sound principles of clinical care including nutrition to safe and efficacious treatment and lifelong care [125]. Moreover, nutrition must be integrated into both patient-based clinical and family care [125]. As HIV infection becomes a chronic disease, infected people should be supported in building healthy habits to prepare for a lifetime of self-care, including good eating habits. Nutrition education for health workers and medical students should go beyond basic knowledge to include metabolic complications of antiretroviral drugs, including incidences of complications, risk factors, and effects in order to identify guidance on clinical care and management [126].

Despite the fact that pain, other symptoms and psychosocial problems are prevalent among PLHIV [127, 128], the present study shows that health workers' knowledge about palliative care was the lowest of all the knowledge domains. Pain causes suffering and is associated with reduced treatment adherence [127]. Despite being a widespread public health issue, pain is often under-treated [129]. The reasons for this include lack of training and mentoring [127], lack of awareness, misunderstanding of the benefits of pain-reducing medications and fear of drug addiction [130]. These factors have resulted in low availability and accessibility of opioids [127] and lack of attention to palliative care for patients with progressive HIV infection or cancer [131].

A palliative care rapid situation analysis in Vietnam in 2005 found a high level of unmet needs for pain and symptom control, psychosocial support and training for clinicians [130]. The analysis led to the development of Vietnamese national guidelines on palliative care in 2006. Still, access to palliative care remains limited. Similar situations occur in other countries where palliative care has been widely discussed but not broadly applied [127, 128, 130]. Again, the most significant challenge appears to be the fear of addiction [130]. To overcome this problem, UNAIDS recommends that training for health workers include HIV treatment and palliative care [31]. WHO promotes integration of pain management and palliative care for all countries, highlighting the relief of suffering and the promotion of quality of life regardless of the availability of curative interventions in life-threatening illness [128].

Knowledge about HIV-related stigma and discrimination

The participants demonstrated a comparatively good understanding of the negative effects of stigma and discrimination on PLHIV and their families. Despite this, knowledge about concepts of stigma (19%) and discrimination (12%) remained modest. Knowledge of stigma and discrimination is affected by four factors: geographical area; number of years working in health sector; attitude to separation and isolation of PLWH, and attitude to colleagues who have HIV infection.

The health workers in urban (Ha Noi) or coastal area (Quang Ninh) have better knowledge than the ones in mountainous area (Dien Bien) ($P < 0.001$). Notably, the participants who have higher number of year working in the health sector, have lower level of knowledge ($P < 0.01$). This can be explained by the facts that young health workers had more chances to access to new information while the older ones were influenced by the societal prejudice on HIV and drug users. Despite many efforts to date, stigma and discriminatory behaviours, even among health workers, remain the most significant barriers to an effective response to HIV [15] [6, 16, 74].

In regards to the variable of knowledge of health workers on stigma and discrimination, we identified four factors including geographical areas, number of years working in the health sector, attitude about isolation and separation of PLHIV and attitudes towards HIV-positive colleagues.

Our findings suggest an urgent need to have more in-depth education and training on the issue of stigma and discrimination reduction which providing PLHIV with better access to health services [31]. The study results show that resources for training should be used in a more effective way and on the right targets. In this study, most of the participants work in hospitals (70%) but they did not have chances to be trained even on the topics closely related to their works e.g. ART for adults (28%), ART for children (17%); palliative care (26%) and nutrition (31%), while the participants who work in HIV/AIDS centres dealing mainly with prevention activities, but had high opportunities in training on all the topics e.g. ART for adults (92%) , ART for children (77%), palliative care (61%), and nutrition (54%).

Training on HIV

The National Strategy on HIV/AIDS Prevention and Control 2004–2010 has emphasized diversified training forms for health workers, including pre- and in-service and short and long term training [132]. Further, the new National Strategy until 2020, with a vision to 2030, states that a 'standard training curriculum and materials on HIV should be developed in all medical universities' [133]. Knowledge plays a pivotal role in the response to HIV and in achieving universal access to health services [134-136]. It forms a bridge between provision of treatment, and preparation of involvement of people and communities.

Education and training should not be seen as a separate component, a new initiative or an additional burden to an already overstretched health system but as an integral part of interventions [137]. It also provides an opportunity for community members, educators and health workers to become active partners. Training should be offered in multiple modalities, including formal and informal, and in all aspects, from the policy-making process to the teaching curriculum and materials [138]. The *UNAIDS 2011–2015 Strategy* states that in order to achieve the goal of zero new infections, political incentives, social movements and HIV education for all are required [31].

Studies examining health worker training in HIV in resource-constrained settings indicate that with appropriate training, mentoring and supervision, clinicians, nurses and community health workers can produce high quality services [27, 139, 140]. Training curricula should be designed to meet the roles, competency levels and performance standards that are expected of trainees [27]. A national survey on training needs for clinicians in Uganda reinforced the notion that training should be an integral part of the support for task shifting [141].

In Ethiopia and Malawi, a study on tackling health workforce shortages during antiretroviral therapy scale-up recommended a combination of measures including reinforcement of pre-service training and improved health staff remuneration [142]. The WHO, the World Bank, and the Bill & Melinda Gates Foundation *Task Force for Scaling up Education for Health Workers*, also suggest 'substantial expansion of pre-service training and common educational platforms for different types of health workers' [143].

Contributions and implications

Paper IV is the result of a cross-sectional survey with questionnaires adapted from other studies. The Paper confirms the finding of Paper II & III that stigma and discrimination are major barriers to HIV response in Vietnam. It suggests an urgent need to have more in-depth education and training on that issue for the health workers. Besides that, attentions should be given to improve the knowledge on palliative and nutrition cares for health workers in clinical work in the hospitals.

Limitations

There are several limitations to this study. First, the results may not be generalized to all of health workers in Vietnam, because the study sample may not be a representative sample. Second, Hanoi city and two provinces of Quang Ninh and Dien Bien were purposively selected; generalizability to all the 63 cities and provinces of the country cannot be asserted. The study was a cross-sectional survey, so the knowledge of health workers may change with new information and training during the period subsequent to this study. In addition, sample sizes in some sub-groups of specialized care were small. Finally, the study did not explicitly mention knowledge about TB and HIV co-infection, prevention of TB and screening TB in PLHIV. These issues are mentioned in the recommendation for research and practice.

Role of private health sector

As the global HIV response evolves from emergency relief to sustained programmes, the role of the private health sector should be considered. While the private health sector in Vietnam is increasing, so far no report of the government and international donors have mentioned about its role in HIV response.

Many studies in other contexts have showed that private health sector could help in delivering HIV-related services [144-146]. A study by Wang et al. (2010) in 12 countries in Africa, Latin America and Asia showed that some challenges in engaging this sector such as i) types of services e.g. HIV testing, treatment of sexually transmitted infections, varies by region and country; ii) the private sector usually lacks financial incentives to provide HIV services and other primary health services; iii) the private health sector is usually concentrated in urban area [144]. Another concern was the uneven quality and affordability of private sector health services [145].

Therefore, the government and international organizations should explore options for efficiency engaging all the sectors of the health system including the private one to maximise the HIV response, e.g. public-private partnership as one feasible option. More research on the role of private health sector in provision of medical check-up, testing, care and treatment for PLHIV. The Government and international development partners often emphasize the need of coordination with civil society organizations. These include religious groups, community-based

organizations, local NGOs etc. The civil society organizations have played an increasing role in the HIV response, including a range of areas from social mobilization to treatment and care. However, private health sector has been rarely mentioned.

5.5. METHODOLOGICAL CONSIDERATIONS

Reflexivity

According to Green and Thorogood (2011) reflexivity refers to "The process of reflecting on both researchers' own effect on the data generated as a participant in the field, and on the social and cultural processes of the research itself" [147]. First, reflexivity involves reflecting on the research itself. Why is it possible to ask this research question now? Second, reflexivity involves the role of researcher in generating and analysing data who you are and where you are as the researcher [147]. Reflexivity is primarily of importance to qualitative studies since it deals with the researchers' influence on interviews, interpretations and any preconception the researches may have of these.

I was the first author of all four Papers I, II, III and IV. I am a Vietnamese medical doctor by training with 20 years of work in the health sector in Vietnam. Furthermore, I conducted interviews and focus group discussions for Papers I, II, and III and was involved in the design and data analysis of Paper IV. All other authors of the four papers have medical or public health backgrounds. They have experiences in conducting research in Vietnam and developing countries.

I used to work as programme officer of the Embassy of Sweden in Hanoi and responsible for health cooperation between Sweden and Vietnam during the period 1995-2010. Therefore, I had very good contacts with many officials of the Ministry of Health, hospitals, provincial health departments, provincial HIV/AIDS Centre in many provinces in Vietnam. So it was very easy for me to arrange interviews and group discussions with the health officials (*Social status of researcher*). As both I and study participants were involved in health programmes, therefore, interviews and group discussions went in good atmosphere e.g. interactive and open manners.

The study participants were open in interviews and active in discussions (*Social setting of the research*). Secondly, I used to apply different conceptual frameworks in studies such as Health Policy Triangle Framework in Study I, Spector' Job Satisfaction Survey in Study II, HIV/AIDS-related Stigma and Discrimination Conceptual Framework in Study III. I described in details in these Papers on how I used the Frameworks in study design, in developing guides for interviews and group discussions, in data analysis and interpretation of findings (*Theoretical openness*). Thirdly, the research topic on how to strengthen the human resource for HIV/AIDS in Vietnam was one of the highest priorities of the health sector, and it was not a sensitive issue such as corruption or human rights, therefore, the study participants were open to talk about the topic (*Awareness of the wider social context*). Finally, though I am involved in the health sector but I have not been worked as doctor in hospitals in HIV area so that I might look the study findings e.g. stigma, fear of infections with "fresh eyes" of an outsider (*Social status of researcher*). The disadvantage of my involvements in conducting the interviews and group discussions might be my preconceptions about different topics in the four studies. These preconceptions or taken-for-granted assumptions might shape the interpretations of study findings.

Trustworthiness

Research findings should be as trustworthy as possible and that every research study must be evaluated in relation to the procedures used to generate the findings [71]. According to Dahlgren et al. (2004), true value refers to the "ability of the study to capture what the research really aimed at studying, meaning that the results are not simply the product of research design errors, misunderstandings, or influence of unknown factors" [110]. This is referred to as *internal validity* or a lack of bias in quantitative research and *credibility* in qualitative research. In qualitative research, true value is assessed through *credibility*. Credibility refers to the ability to really capture the multiple realities of those we study. Graneheim and Lundman (2004) suggested measures for achieving trustworthiness including *credibility*, *depended ability* and *transferability* [71]. C*redibility* deals with the focus of the research and refers to confidence in how well data and processes of analysis address the intended focus. *Dependability* seeks means for taking into account the degree to which data change over time and alterations made in the researchers' decisions during the analysis process. *Transferability* refers to the extent to which the findings can be transferred to other settings or groups [71].

Measures for achieving credibility

Literature reviews were conducted for all studies in order to discover what have been done so far in the study areas and topic areas. Paper II used data from the survey of the IntraHealth International-led Capacity Project Assessment of Human Resources Needs for Management and Coordination of HIV/AIDS Prevention, Treatment, Care and Support Programs in Vietnam funded by USAID in collaboration with Vietnam Administration for HIV/AIDS Control. Paper III used data from the survey carried out by Family Health International (FHI) 360 and the Hanoi Medical University funded by The Centers of Disease Control and Prevention (CDC) Atlanta. Both surveys were designed by international and national experts of the IntraHealth (Study II) and FHI (Study IV).

Many activities were implemented to increase the credibility of studies. Triangulation occurred on three levels. First, several kinds of informants were included in Studies I, II and III, for instance: policy makers at central level and health managers at provincial level (Paper I); and health workers involved in general management, direct care and treatment of PLHIV in hospitals (Paper II and III). This means that various perceptions and experiences could increase the possibility of shedding light on the research questions. Second, multiple data collection methods were applied, including policy document review (Paper I), interviews (Papers I, II, III), FGDs (Paper II) and a cross-sectional survey (Paper IV). Third, the authors of the papers were from both outside and inside Vietnam, different disciplines and different religions. They all took part in the planning, interpretation and paper- writing phases. Finally, extensive notes on important decisions throughout the research process were taken and the researchers kept personal journals where general impressions and reflections were recorded.

In Paper II, credibility was established thorough the inter-coder check, which meant comparing the coding in Vietnamese performed by the first author and coding into English by the second author. Preliminary results were also checked in a similar fashion. The study findings are illustrated with quotations from interviews and focus groups. The collaboration of researchers engaged with the current study came from different backgrounds which ensured, to a certain extent triangulation of researchers' perspectives.

The first author shared preliminary study findings to colleagues in the Hanoi Medical University and the Karolinska Institutet in order to receive input and critical comments from

those outside the research process (for the purpose of peer-debriefing*)*. Draft papers were presented to various national and international scientific conferences. Inputs from these conferences were used to refine the papers and to help interpret the results further. Papers I, II, and III have been published in international journals flowing several revisions with the comments from reviewers.

Measures for achieving dependability

When conducting the interviews and group discussions for Papers I, II and III, the first author used guides for interviews and group discussions so that common issues were raised with all or most participants in each study. After each interview or group discussion, the first author shared initial impressions and observations with the research team in the field and with the co-authors in order to agree on follow-up questions, and whether to broaden or narrow the focus of subsequent interviews and discussions.

The tape-recorded interviews and group discussions were transcribed verbatim in Vietnamese and then translated into English. Then, the interviews were read through several times by the first two authors to identify key messages of interviewees and to obtain a sense of the whole. The Vietnamese and English versions were reviewed and analysed side-by-side during the coding procedure to avoid any misinterpretation of the full meaning of the texts. Themes were discussed and agreed on by all co-authors.

Measures for achieving transferability

Transferability refers to "the extent to which the findings can be transferred to other settings or groups" [71] or "the extension of *conceptual* rather than *empirical* findings to other settings" [147].

In Paper I, the first author observed that health policy analysis approaches can be applied in a traditional one- party state like Vietnam and that similar policy chances took place as those found in pluralistic societies, but thorough more top-down and somewhat hidden processes. Therefore, the authors recommended that enhanced participation of other actors (such as members of civil society) in the policy process will contribute to policy formulation and implementation that meets the diverse needs and concerns of the people (a*nalytical generalisation)*.

In Papers II and III, different conceptual models were developed such as an Adjusted Sector's Model of Job Satisfaction for HIV Service Health Workers (Paper II), and a Conceptual Model of HIV-related Stigma Impacts on Health Workers (Paper III) (a*nalytical generalisation).*

Details of the data collection and analysis have been described in all the papers. In qualitative papers I, II, III, guides for interviews and group discussions were developed and tested before being used in studies. After each interview and group discussion, the first author described these activities in details and discussed initial impressions with other co-authors, in order to agree on the new direction and/or the focus in subsequent interviews and discussions.

Much contextual information was collected and provided in the report to allow readers to judge transferability (*naturalistic generalisation*). Furthermore, a discussion was provided in the articles about what aspects of the results that may be transferable beyond the study population (*analytical generalisation*)

6 CONCLUSION AND RECOMMENDATION

6.1. CONCLUSION

During the last two decades, Vietnam's HIV policy has evolved from one focused on punitive control measures to a more rights-based approach, encompassing harm reduction and payment of health insurance for the medical costs of PLHIV. Low salaries and staff reluctance to work with these patients, many of whom are drug users and female sex workers, were described as the main barriers to health staff motivation.

Working within the HIV services is perceived by Vietnamese health workers as having both positive and negative aspects. Factors relating to job satisfaction included training opportunities, social recognition, and meaningful tasks. Factors relating to job dissatisfaction included unsatisfactory compensation, lack of positive feedback and support from supervisors, work-related stress, fear of infection, and stigma because of association with PLHIV.

Stigma has been identified as a major barrier to the HIV response. The experiences of stigma by HIV service health workers may be organised around several themes: i) Little professional prestige associated with the HIV work; ii) Fear expressed by family members; iii) Feelings of being devalued; and iv) Work-related stress and burnout, especially for staff working in detention centres for drug users and female sex workers.

Over recent decades, successful antiretroviral therapy has improved the survival of PLHIV. The infection has evolved into a chronic disease. Therefore a new model of care, including new training content for the health workforce, is needed. Besides basic knowledge about HIV, priority should be given to training on HIV-related stigma and discrimination, palliative and nutritional cares for PLHIV.

6.2. RECOMMENDATION FOR POLICY

- Vietnam's HIV-related policy has converged towards internationally recognised approaches since the late 1990s. The policy- making process has been a top down approach, controlled mainly by central state institutions with limited and passive involvements from the provinces, members of civil society and PLHIV. Historical and political context dictated this top-down manner to be the most feasible approach. While significant policy change took place under this approach, the success of implementation needs to be assessed and evaluated.
- Enhance the participation of other actors, such as members of civil society and PLHIV in the HIV policy-making process in the future. This is likely to contribute to policy formulation and implementation that meets the diverse needs and concerns of Vietnamese people.
- Improve working conditions in HIV service facilities; enhance stress management and create a safe and supportive working environment in order to ensure motivated people are in place to meet the growing demand for the HIV services.
- As the progression of the HIV epidemic is moving from emergency relief to long term chronic care, policies should take into account the expansion of the private health sector in Vietnam and its implications to the national response to HIV.

6.3. RECOMMENDATION FOR PRACTICE

- Provision of more information, education and communication in the mass media to improve the public image of HIV services.
- Improvements in workplace safety should be carried out so that the health workers feel their work is valued and that they are safe, specifically actions should aim at reducing risks of occupational hazards including HIV and TB transmission.
- Stigma- reduction interventions should be targeted at health workers, their families, and colleagues.
- Besides training health workers on basic knowledge about HIV, attention should be given to training on stigma and discrimination, and on palliative and nutrition cares for PLHIV.

6.4. RECOMMENDATION FOR RESEARCH

- Opportunities for further research might include conducting longitudinal or interventional studies to investigate how changes in the factors discussed in Paper II influence job satisfaction. Further work to develop tools and methods for uses in job satisfaction surveys (as well as other job satisfaction models) would be helpful.
- More research on the role of private health sector in delivering HIV-services. Options for efficiency engaging all the sectors of the health system including the private one e.g. public-private partnership, to maximise the HIV response, should be explored.

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9 APPENDICES

APPENDIX I: INTERVIEW GUIDE OF STUDY I

1. In 2004, the Government approved the National HIV/AIDS Strategy; please describe the strategy making process and your involvement.

2. In 2005, the Party issued the Directive 54 on HIV/AIDS; please describe the directive making process and your involvement.

3. In 2006, the National Assembly adopted HIV/AIDS Law; please describe the law making process and your involvement.

4. What are the relations between the National Strategy, Party Directive and the Law?

5. What were the advantages and difficulties occurred during these policy making processes?

6. The HIV/AIDS National Strategy has 8 action plans and one of which is on capacity building, what are your views on situation of the health human resources for HIV/AIDS in Vietnam?

7. Nowadays, some health staff has left the government agencies and hospitals to work for donor funded projects, what do you think about that?

8. What are the government incentives for staff working on HIV/AIDS at central and at provincial levels?

9. We have heard that some health staff does not want to work on HIV/AIDS, especially in the prevention field? What do you think about that?

10. What are your views on training staff on HIV/AIDS?

11. How can we improve the human resources for HIV/AIDS in Vietnam?

APPENDIX II: GUIDES FOR FOCUS GROUP DISCUSSIONS AND INTERVIEWS OF STUDY II

Action field: Human Resource Management System	Questions	Check appropriate boxes
Personnel systems (workforce planning, staffing norms, recruitment, hiring, deployment)	*Workforce planning:* • How is the decision made about the number and type of workforce needed to manage HIV/AIDS programs at each level of your organization? • How often are workforce plans re-examined so that needed changes can be made? When was the last time? *Staffing norms:* • Are the number and mix of HIV/AIDS staff correct or are changes needed in order to address the HIV/AIDS mission? *Recruitment & Hiring:* • What recruitment and hiring practices are needed to improve HIV/AIDS services? *Deployment:* • To what extent is deployment equitable across regions or populations involved in HIV/AIDS?	*Workforce planning:* ☐ There are staff specifically dedicated to HRM functions. ☐ Workforce planning is done regularly based on workforce data, and not an ad-hoc basis. ☐ Workforce planning is done based on defined criteria related to the HIV/AIDS Mission. *Staffing norms:* ☐ HIV/AIDS Staffing levels and mix of personnel is adequate. ☐ HIV/AIDS Staffing levels and mix of personnel is based on evidence (data) and/or input from local health professionals. *Recruitment & Hiring:* ☐ Formal procedures are consistently used for recruitment, hiring, transfer, and promotion. *Deployment:* ☐ Deployment strategies take into account regional variations in staffing needs, HIV/AIDS workload, and health worker productivity.
Work environment and conditions (employee relations, workplace safety, job satisfaction and career development)	*Employee relations* • What factors influence the quality of the working relationships between health staff in the HIV/AIDS services? *Workplace safety* • Does your organization have an HIV/AIDS workforce prevention program? *Job satisfaction* • What do you think is the major source of job satisfaction, and job dissatisfaction, for most employees working in HIV/AIDS services? • Do staff seek additional	*Employee relations* ☐ Working relationships between staff in HIV/AIDS services are positive. ☐ A policy of non-discrimination on the basis of HIV/AIDS exists for both patients and staff and is followed. *Workplace safety* ☐ An HIV/AIDS workforce prevention program exists that follows protocols to minimize risk of infection and provides HIV/AIDS education. *Job satisfaction* ☐ Staff morale is generally high with good job satisfaction. ☐ A staff retention strategy is in place that effectively helps reduce staff turnover in HIV/AIDS

	employment besides their government jobs? What are reasons HIV/AIDS staff seek outside employment (if any)? • Is there a high turn-over? *Career development* • What professional management and leadership development opportunities in HIV/AIDS services exist for staff at all levels?	services. ☐ Few employees hold positions outside their government jobs ☐ Staff understand their role in the organization and the organization's mission. *Career development* ☐ Adequate management and leaderships opportunities are available for staff at all levels and includes issues that relate to managing HIV/AIDS programs.
Human Resource (HR) information systems (HR information system integration of data sources to ensure timely availability of accurate data required for planning, training, appraising and supporting the workforce)	*HR information systems* • How and how easy is it to access information concerning the number of staff, positions, locations, rate of attrition, and other critical personnel information? • What is the quality of the data with respect to HIV/AIDS staffing? To what extent is it accurate and timely/up-to-date?	*HR information systems* ☐ Most of the relevant personnel information is collected in a systematic way. ☐ Data quality is high. ☐ Data is up to date. ☐ Data are easily available and accessible. ☐ Data are consolidated/not fragmented. ☐ Data are used in human resources planning.
Performance management (performance appraisal, supervision and productivity)	*Performance appraisal* • How does your organization assess employee performance? How often? • Are job descriptions and individual work plans regularly reviewed and adjusted to HIV/AIDS program priorities? *Supervision & Inspection* • Are supervisors trained in supervisory skills within an HIV/AIDS program context? • Is there sufficient supervisory capacity for inspection and monitoring of professional standards? *Productivity* • In terms of idle, unproductive time, what improvements could be made to make HIV/AIDS services more efficient? • To what extent is absenteeism prevalent within HIV/AIDS	*Performance appraisal* ☐ The performance appraisal process is in place and understood by employees. ☐ Staff have job description that are regularly reviewed and adjusted based on changing responsibilities/tasks within HIV/AIDS services ☐ Employees have individual work plans that are the basis for performance appraisal. *Supervision* ☐ Supervisors are sensitive to HIV/AIDS problems and issues ☐ Supervisors are trained in supervision skills and provide interim feedback to affect employee performance. *Productivity* ☐ There is little unproductive time in HIV/AIDS services. ☐ Absenteeism is low.

	services? Why?	
Action field: Policy	**Questions**	**Check appropriate boxes**
Policy choices that affect HR in HIV/AIDS	*Policy choices that affect HR in HIV/AIDS* • Are there certain policies that have created barriers to the development of effective HR for HIV/AIDS services that need to be addressed? What are they? • Are HRM policies and practices adjusted to comply with local or national labour law, including HIV/AIDS regulations?	*Policy choices that affect HR in HIV/AIDS* ☐ There are no structural policy barriers to developing an effective HRH program for HIV/AIDS. ☐ HRM Policies and practices are regularly adjusted to local and national labour laws.
Action field: Partnerships	**Questions**	**Check appropriate boxes**
Processes for multi-stakeholder cooperation	*Processes for multi-stakeholder cooperation* • To what extent can HRH issues and problems pertinent to HIV/AIDS solved by coordinating multiple stakeholders and partners?	*Processes for multi-stakeholder cooperation* ☐ Key stakeholders and partners are included in HRM activities in HIV/AIDS services.
Action field: Leadership	**Questions**	**Check appropriate boxes**
Leadership development for HR managers	*Leadership development for HR managers* • Do HR managers receive sensitivity training to HIV/AIDS issues among staff? • Do HR managers receive training in HIV/AIDS policies • What leadership and management training needs exist for HR managers?	*Leadership development for HR managers* ☐ HR managers receive HIV/AIDS sensitivity training. ☐ HR Managers receive training in HIV/AIDS policies ☐ Few management training needs exists among HR managers.
Capacity for multi-sector and sector-wide collaboration	*Capacity for multi-sector and sector-wide collaboration* • To what extent is HR management of HIV/AIDS services able to create opportunities for improvement based on collaboration within and beyond the HIV/AIDS sector?	*Capacity for multi-sector and sector-wide collaboration* ☐ HRM in HIV/AIDS services are able to create opportunities for multi-sector coordination.
Action field: Finance	**Questions**	**Check appropriate boxes**
Salaries, allowances, incentives	*Salaries, allowances, incentives* • How are salaries, allowances, and incentives managed? What should be improved? • How well do donors coordinate incentive programs for HIV/AIDS programs?	*Salaries, allowances, incentives* ☐ A formal system for setting starting salaries, benefits, or other incentives exists and is reviewed. ☐ The system is fairly used. ☐ The system is routinely used. ☐ The system suffices to attract and retain qualified staff. ☐ Coordination among donors exists.
Financial	*Financial Management*	*Financial Management*

Management	• Is there sufficient expertise in financial planning to support HIV/AIDS programmatic objectives? • Do program managers work with financial staff to develop HRH budgets that support HIV/AIDS programmatic decisions? • Does the finance system present an accurate and complete picture of expenditures, revenues, and cash flow in relation to HIV/AIDS program outputs and services?	☐ Financial staff is able to provide adequate program support. ☐ Financial staff coordinates with program managers when developing budgets. ☐ The financial system accurately reflects program outputs and services.
Action field: Education	**Questions**	**Check appropriate boxes**
Pre-service and in-service training for management and coordination	*Pre-service and in-service training for management and coordination* • Is management training a valued part of the HIV/AIDS services area for which opportunities are developed? What should be improved?	*Pre-service and in-service training for management and coordination* ☐ Management training is valued and supported.
Capacity of training institutions in management and coordination	*Capacity of training institutions in management and coordination* • To what extent does management training relate to questions relevant to HIV/AIDS? How can this be improved?	*Capacity of training institutions in management and coordination* ☐ Management institutions are accessible. ☐ Management training is relevant to HIV/AIDS key priorities.

Description of facets of job satisfaction (adapted from Job Satisfaction Survey of Paul Spector, 1997)

Facet	Description
Pay	Pay and remuneration *Feeling of being paid a fair amount for the work done* *Raises are too few and far in between* *Feel underappreciated by organization when thinking about what the pay* *Satisfaction with the chance for salary increase*
Promotion	Promotion opportunities *Too little chance for promotion at current job* *Those, who do well have a fair chance of being promoted* *People get promoted as fast as they do in other places* *Satisfied with chances to promotion*

Supervision	Immediate supervisor *My supervisor is quite competent in doing his/her job* *My supervisor is unfair to me* *My supervisor shows too little interest in the feelings of subordinates* *I like my supervisor*
Fringe Benefits	Monetary and nonmonetary fringe benefits *I am not satisfied with the benefits I receive* *The benefits we receive are as good as most other organization offer* *The benefit package we have is equitable* *There are benefits we don't have which we should have*
Contingent Rewards	Appreciation, recognition, and rewards for good work *When I do a good job, I receive the recognition for it that I should receive* *I don't feel that the work I do is appreciated* *There are few rewards for those who work here* *I don't feel my efforts are rewarded the way they should be*
Operating Procedures	Operating policies and procedures *Many of our rules and procedures make doing a good job difficult* *My efforts to do a good job are seldom blocked by red tape* *I have too much to do at work* *I have too much paperwork*
Co-workers	People you work with *I like the people I work with* *I find I have to work harder at my job than I should because of the incompetence of people I work with* *I enjoy my co-workers* *There is too much bickering and fighting at work*
Nature of Work	Job tasks themselves *I sometimes feel that my job is meaningless* *I like doing things I do at work* *I feel a sense of pride in doing my job* *My job is enjoyable*
Communication	Communication within the organization *Communication seems good in this organization* *The goals of this organization are not clear to me* *I often feel I don't know what is going on with the organization* *Work assignments are often not fully explained*

APPENDIX III: INTERVIEW GUIDE FOR STUDY III

General information
Year of Birth; Sex:
Highest educational degree: PhD; Master of Science; Specialization level I; Specialization level I II; Medical doctor; Bachelors; Engineer
Year of university graduation:
Year of graduation of highest educational decree:
Number of years working in the health sector:
Health specializations have you ever worked:
Current specialization: Name of current agency: Current position:
Number of years working at current position

1. Have you ever felt that someone in society has reflected negatively on you because you work with HIV/AIDS patients? If so, why?

2. Have you ever felt negative feelings about your work from your family members? If so, what type?

3. How do you feel about the attitudes of your colleagues in the hospital/clinic/centre about your work with HIV/AIDS patients?

4. Do you think that healthcare workers feel or show stigma toward HIV patients? In what way? Have you seen any examples of this?

5. What is your assessment of the risk of contracting TB in your work for HIV/AIDS?

6. What is your assessment of the risk of contracting HIV in your work for HIV/AIDS?

7. If the respondent has discussed "social evils" ask: What is your assessment of the risk of being influenced by close contact with people who are associated with "social evils"?

8. What is your plan for future?

9. In your opinion, what need to be done to make your work easier?

APPENDIX IV

QUESTIONNAIRE 1: BASIC QUESTIONNAIRE SHEET ON HIV/AIDS KNOWLEDGE AND ATTITUDES

INTERVIEW OF HEALTH WORKERS IN FACILITIES NOT DIRECTLY INVOLVING IN HIV/AIDS HEALTHCARE SERVICES

Code ☐☐☐☐☐

Dear colleague,

My name is..... I am working as a surveyor for the Project on Assessing healthcare workers' training needs on HIV treatment and care.

This research project is carried out jointly by the Hanoi Medical University and FHI Vietnam with the aim to find out about available training programs on HIV/AIDS for medical students and healthcare workers, and to explore healthcare workers' needs for HIV/AIDS training, current training inadequacies and ways to overcome these inadequacies. Our survey comprises two main parts: a 30-to-45-minute interview and an enquiry sheet to be filled out by the respondents.

You are kindly invited to take part in our survey. Your participation in the survey is completely voluntary, and your identity will be kept confidential. Your answers will not be disclosed or given to any other third party. You will not be required to disclose your name to the surveyor(s).

Many thanks for your cooperation.

DO YOU AGREE TO TAKE PART IN THE SURVEY?
1. **YES**
2. **NO (TERMINATE THE INTERVIEW)**

Interview date:……/……./2010

Surveyor's name: …….....

Supervisor's name: …….....

Surveyor's notes on the interview (if any)

…….....

…….....

…….....

…….....

…….....

A - GENERAL INFORMATION

N^0	Questions	Answer	Code	Transfer
A1	Year of birth (Official public working calendar)	..... Do not remember	 77	
A2	Gender	Male Female	1 2	
A3	What's your current marital status?	Single Married Separated Divorced Widow/Widower Do not answer	1 2 3 4 5 99	
A4	What's your highest academic qualification?	Doctorate Masters MD specialist 1st degree MD specialist 2nd degree Medical Doctor/Bachelor's Degree/Engineer Other (Please specify)..... Do not remember	1 2 3 4 5 6 77	
A5	You graduated from the medicine University in (year)	.....		
A6	You got your highest qualification in (year)	.....		
A7	Experience working in the medical sector	…….years		
A8	Have you ever been trained on methadone therapy as a heroin withdrawal treatment?	Yes No	1 2	
A9	Have you ever been trained on HIV palliating care?	Yes No	1 2	
A10	Have you ever been trained on HIV-related themes/topics?	Yes No	1 2	**--> A12**

A11	If yes, what themes/topics have you been trained on? SURVEYOR REPEATS ANSWER AND CIRCLE CORRESPONDING OPTION		**Yes**	**No**	**Do Not Remember**	**Do Not Answer**
		HIV epidemiology	1	2	77	99
		HIV virology	1	2	77	99
		HIV immunology	1	2	77	99
		ARV treatment for adults	1	2	77	99
		ARV treatment for children	1	2	77	99
		Opportunistic infection treatment for HIV	1	2	77	99
		patients	1	2	77	99
		Voluntary Counseling and Testing	1	2	77	99
		Mother-to-child infection prevention	1	2	77	99
		Education for behavioral change	1	2	77	99
		Nutrition for HIV patients	1	2	77	99
		National programs on HIV	1	2	77	99
		Other (please specify)……	1	2	77	99

A12	What are different fields of medical specialization have you worked in?	....		

A13	What is your current field of medical specialization?	.....	
A14	What is your current work place/employer?	.....	
A15	What is your current job?	.....	
A16	How many years have you been working for the current work place/employer?	……months…….years	
A17	What is your current monthly income from healthcare services including incomes from your main job with the hospital and other private practices if any?	Specify the amount of money (in millions and hundreds of thousands) ……VND	
A18	Is there anybody in your family (spouse/parent) directly employed in healthcare services for HIV treatment and prevention (including drug withdrawal treatment)?	Yes 1 No 2 Do not answer 99	
A19	Over the past 90 days (03 months), how many people that you know for sure have HIV/is a drug user/is a female sex worker/is a male homosexual have you come in contact with?	Number of people living with HIV _____ Number of drug users _____ Number of female prostitutes_____ Number of homosexual men_____ *0 if no contact with any of the above* *77 if answer is 'do not know' or 'do not remember'*	
A20	How many days ago did you last meet a patient from one of the above-mentioned groups?	Number of days _____ *0 day if it's today* Do not remember 77 Have not met anyone so far 99	

B- HIV EPIDEMIOLOGY-VIROLOGY-IMMUNOLOGY

No	Questions	Answer	Code	Transfer
B1	What are the main routes of HIV transmission? SURVEYOR NOT ALLOW TO SUGGEST ANSWER MULTIPLE-CHOICE QUESTION	Unsafe blood transfusion Shared syringes Saliva Mother-to-child transmission Vaginal sexual intercourse Sodomy Oral sex Hugging and kissing Mosquito bite Other (please specify)……..... Do not know Do not answer	1 2 3 4 5 6 7 8 9 10 77 99	
B2	When does mother-to-child HIV transmission happen? SURVEYOR NOT ALLOW TO SUGGEST ANSWER MULTIPLE-CHOICE QUESTION	During pregnancy During labor Through breastfeeding All the three above stages: pregnancy, labor and breastfeeding Other (please specify) ……..... Do not know	1 2 3 4 5 77 99	

		Do not answer				
B3	What do you think are the population groups in Vietnam where HIV is most prevalent? SURVEYOR NOT ALLOW TO SUGGEST ANSWER MULTIPLE-CHOICE QUESTION	Injecting drug users Female prostitute Male homosexual Female prostitutes' sex partners Injecting drug users' sex partners New military recruits Pregnant women All population groups Other (please specify) ……..... Do not know Do not answer	1 2 3 4 5 6 7 8 9 77 99			
B4	Please enumerate 09 national target programs within the National Program for HIV/AIDS prevention? SURVEYOR NOT ALLOW TO SUGGEST ANSWER MULTIPLE-CHOICE QUESTION	Advocacy and education for behavior change HIV harm reduction intervention program Care and support programs for HIV/AIDS patients Monitoring and evaluation program Program for accessing HIV/AIDS treatment Mother-to-child infection prevention program STDs management and treatment Safe blood transfusion program Capacity building and international cooperation program Other (please specify)…… Do not know Do not answer	1 2 3 4 5 6 7 8 9 10 77 99			
B5	Which body fluids and secretions have a high enough HIV concentration for HIV transmission? SURVEYOR READS ALL OPTIONS AND CIRCLES CHOSEN OPTIONS		**Yes**	**No**	**Do not know**	**Do not answer**
			1	2	77	99
		Blood	1	2	77	99
		Semen	1	2	77	99
		Vaginal fluid	1	2	77	99
		Breast milk	1	2	77	99
		Saliva, tears, urine	1	2	77	99
		Amniotic fluid	1	2	77	99
		Other blood-stained body fluids				
B6	How long do you think HIV can survive outside the human body?	A few hours A few days A few weeks A few years Other (please specify): ……..... Do not know Do not answer	1 2 3 4 5 77 99			
B7	HIV can be destroyed by which of these sterilizing methods? SURVEYOR NOT ALLOW TO SUGGEST ANSWER MULTIPLE-CHOICE QUESTION	Cold temperatures Regular disinfectants (70^0 alcohol, bleach, phenol, aldehyde) Ultraviolet rays/ gamma rays Other (please specify): …… Do not know Do not answer	1 2 3 4 77 99			
B8	What are the main target cells that HIV infects and depletes?	T_{CD4} lymphocytes Macrophages T_{CD34} Stem cells B lymphocytes	1 2 3 4			

		Natural killer cells 5 T_{CD8} lymphocytes 6 Other (please specify): 7 …… 77 Do not know 99 Do not answer	
B9	How does HIV affect T_{CD4} lymphocytes? SURVEYOR NOT ALLOWED TO SUGGEST ANSWER MULTIPLE-CHOICE QUESTION	HIV causes changes in T_{CD4} lymphocytes count 1 HIV causes changes in T_{CD4} lymphocytes' functions 2 3 Other (please specify):…… 77 99 Do not know Do not answer	
B10	Please enumerate the progression phases from HIV infection to AIDS in the human body. SURVEYOR NOT ALLOWED TO SUGGEST ANSWER MULTIPLE-CHOICE QUESTION	Primary infection (acute infection or window stage) 1 Asymptomatic stage 2 Symptomatic stage (para-AIDS) 3 AIDS 4 Other (please specify): 5 ……..... 77 99 Do not know Do not answer	

B11	Please compare between Heptitises B&C and HIV in terms of infection risk to healthcare workers (lower risk of infection, higher risk of infection or same risk of infection)		**Higher risk of infection**	**Lower risk**	**Same risk**	**Do not know**
		Hepatitis B	1	2	3	77
		Hepatitis C	1	2	3	77

C- HIV PREVENTION KNOWLEDGE

No	Questions	Answer	Code	Transfer
C1	How can HIV be prevented? SURVEYOR NOT ALLOW TO SUGGEST ANSWER MULTIPLE-CHOICE QUESTION	Avoid hugging and kissing people living with HIV	1	
		Avoid having meals with people living with HIV	2	
		Always use condoms for sexual intercourses	3	
		Avoid public toilets	4	
		Avoid mosquito bites	5	
		Do not use shared syringes	6	
		Safe blood transfusion	7	
		Other (Please specify)	8	
		……	77	
		Do not know	99	
		Do not answer		
C2	What tests are needed to confirm that somebody is HIV positive?	Rapid HIV testing only is enough	1	
		1 Rapid HIV test + 1 ELISA confirmatory test	2	
		Rapid test + 2 ELISA tests with different biological samples, different antigen preparations and different test principles	3	
		Rapid test + 3 ELISA tests with different samples, different antigen preparations and different test principles	4	
			5	
			77	
		Other (please specify).....	99	
		Do not know		
		Do not answer		
C3	Is there any HIV vaccination available at the moment?	Yes	1	
		No	2	

		Do not know Do not answer	77 99			
C4	What are the circumstances under which occupational exposure to HIV can happen? SURVEYOR NOT ALLOWED TO SUGGEST ANSWER MULTIPLE-CHOICE QUESTION	Splash of blood/body secretions onto skin injuries/scratches Skin puncture by needles or other medical tools carrying blood/body fluids Splash of blood/body fluids onto the mucous membrane Other (please specify) ..... Do not know Do not answer	1 2 3 4 77 99			
C5	How should occupational HIV exposure be handled? SURVEYOR NOT ALLOWED TO SUGGEST ANSWER MULTIPLE-CHOICE QUESTION	On-the-spot treatment of the injury Assess HIV exposure risk Determine HIV status of the source person Test for HIV immediately after exposure Test for HIV 03-06 months after exposure ARV treatment for the exposed person Write down notes of the exposure incident and report to higher authorities Monitor the exposed person Other (please specify……..) Do not know Do not answer	1 2 3 4 5 6 7 8 9 77 99			
C6	Post-exposure ARV treatment is effective only in which of the following situations? SURVEYOR READS ALL OPTIONS AND CIRCLES CHOSEN ONES.		**Yes**	**No**	**Do not know**	**Do not answer**
		After exposed person tested positive for HIV (3 months after exposure)	1	2	7	99
		72 hours after source person tested positive for HIV	1	2	7	99
		As soon as possible if source person is known for sure to have HIV	1	2	77	99
		Other (please specify ……)	1	2	77	99
					77	
C7	Have you ever heard about harm-reduction programs?	Yes No	1 2	→ **C9**		
C8	Please enumerate the harm reduction activities that you know. SURVEYOR NOT ALLOW TO SUGGEST ANSWER MULTIPLE-CHOICE QUESTION	Syringes and needles exchange and handouts Condom handouts Education and advocacy Methadone maintenance therapy as a drug addiction treatment Voluntary Counseling and Testing Treatment of STIs and STDs Treatment of Tuberculosis Preventive treatment of opportunistic infections ARV treatment Other (please specify……..) Do not know Do not answer	1 2 3 4 5 6 7 8 9 10 77 99			
C9	What is the role of Voluntarily Counseling and Testing?	Provide HIV test results Help people living with HIV better understand available services	1 2			

	SURVEYOR NOT ALLOWED TO SUGGEST ANSWER MULTIPLE-CHOICE QUESTION	Reduce and mitigate discrimination Reduce risk behaviors for people testing negative for HIV Counseling to reduce infection risks from people living with HIV Provide psychological support for people living with HIV Provide support in the disclosure of HIV status Enhance treatment adherence Other (please specify…..……) Do not know Do not answer	3 4 5 6 7 8 9 77 99	
C10	At which stage(s) of the voluntarily HIV testing process should counseling take place? SURVEYOR NOT ALLOW TO SUGGEST ANSWER MULTIPLE-CHOICE QUESTION	Before testing only After testing only Both before and after testing Continuous, regular counseling Other (please specify…..……) Do not know Do not answer	1 2 3 4 5 77 99	
C11	What are the socio-economic impacts of HIV? SURVEYOR NOT ALLOW TO SUGGEST ANSWER MULTIPLE-CHOICE QUESTION	Reduction of the average life expectancy Social and psychological impacts on the individual and their family Economic impacts Depletion of the workforce Burdening the healthcare system Other (please specify):…… Do not know Do not answer	1 2 3 4 5 6 77 99	

D-KNOWLEDGE ABOUT HIV CARE AND TREATMENT

N⁰	**Questions**	**Answer**	**Code**	**Transfer**
D1	What are the three most common opportunistic infections amongst people living with HIV in Vietnam? SURVEYOR NOT ALLOWED TO SUGGEST ANSWER MULTIPLE-CHOICE QUESTION	Tuberculosis (TB) Oral mycosis P. Marneffei infection Chronic Fatigue Syndrome Pneumocystis pneumonia (PCP) Candidiasis Liver cancer Other (please specify)……. Do not know Do not answer	1 2 3 4 5 6 7 8 77 99	
D2	Please enumerate the medications needed in the preventive treatment of opportunistic infections for people living with HIV as per the Ministry of Health's guidelines on HIV diagnosis and treatment? SURVEYOR NOT ALLOWED TO SUGGEST ANSWER MULTIPLE-CHOICE QUESTION	Cotrimoxazole Fluconazole Dapsone Penicillin Isonazid Promethazine Other (please specify): …… Do not know Do not answer	1 2 3 4 5 6 7 77 99	
D3	Please enumerate the characteristic	Pain	1	

	symptoms of HIV/AIDS patients that healthcare workers should pay special attention to when tending to people living with HIV? SURVEYOR NOT ALLOWED TO SUGGEST ANSWER MULTIPLE-CHOICE QUESTION	Skin symptoms 2 cachexia 3 Depression 4 Anxiety 5 Prolonged diarrhea 6 Weight loss from unknown reasons 7 Prolonged coughing 8 Prolonged fever of unknown reasons 9 Other (please specify)……. 10 Do not know 77 Do not answer 99	
D4	What qualifies a person living with HIV for ARV treatment?	Clinical conditions 1 Para-Clinical conditions 2 Clinical and para-Clinical conditions 3 ARV treatment can be made available anytime 4 Other (please specify…….) 5 Do not know 77 Do not answer 99	
D5	Please enumerate HIV medications currently in use for HIV treatment in Vietnam. SURVEYOR NOT ALLOW TO SUGGEST ANSWER MULTIPLE-CHOICE QUESTION	Nucleoside reverse transcriptase inhibitors (NRTI) 1 Non-Nucleoside Reverse Transcriptase Inhibitors (NNRTI) 2 Protease Inhibitor(PI) Fusion Inhibitor 3 Other (Please specify).....…… 4 Do not know 5 Do not answer 77 99	
D6	What is the main cause of ARV drug resistance?	Non adherence to treatment 1 HIV rapid mutations 2 Impacts from the environment 3 Combination of various factors 4 Other (please specify)…… 5 Do not know 77 Do not answer 99	
D7	What can be done to enhance ARV treatment adherence? SURVEYOR NOT ALLOWED TO SUGGEST ANSWER MULTIPLE-CHOICE QUESTION	Regular treatment monitoring and supervision 1 Assessment of challenges facing healthcare workers and provision of counseling and support 2 Community outreach of healthcare services 3 Peer group's support Directly Observed Treatment (DOT) 4 Methadone therapy for Heroin addicts living with HIV 5 Education/Counseling on treatment adherence 6 Other (please specify……...) 7 Do not know 8 Do not answer 77 99	
D8	Which is the available support service related to ARV treatment? SURVEYOR NOT ALLOWED TO SUGGEST ANSWER MULTIPLE-CHOICE QUESTION	Counseling and support for treatment adherence 1 Palliative care 2 Home-based/community-based care 3 Preventive care and opportunistic infection treatment 4 Referrals to other medical and social support services Peer group's support 5 Methadone therapy for heroin users living with HIV Other (please specify……....) 6 Do not know 7 Do not answer 8 77	

			99	
D9	What are the main principles of ARV treatment? SURVEYOR NOT ALLOWED TO SUGGEST ANSWER MULTIPLE-CHOICE QUESTION	Antiretroviral therapy should consist of at least 03 ARV drugs from 02 different groups	1	
		ARV is a lifelong treatment	2	
		Opportunistic infections should be treated prior to ARV treatment	3	
		ARV treatment is mainly a outpatient service	4	
		Treatment adherence and healthy lifestyle is highly needed	5	
		Other (please specify) ……	6	
		Do not know	77	
		Do not answer	99	

E- KNOWLEDGE OF DRUG USE AND METHADONE THERAPY

No	Question	Answer	Code	Transfer
E1	Enumerate some drugs that you know SURVEYOR NOT ALLOWED TO SUGGEST ANSWER MULTIPLE-CHOICE QUESTION	Heroin	1	
		Cocaine	2	
		Marijuana	3	
		Amphetamine	4	
		Methamphetamine	5	
		Morphine	6	
		Estacy	7	
		Hashish	8	
		Other (please specify): ……	9	
		Do not know	77	
		Do not answer	99	
E2	What are the characteristics of drug addiction? SURVEYOR NOT ALLOWED TO SUGGEST ANSWER MULTIPLE-CHOICE QUESTION	Dosage increase	1	
		Withdrawal syndrome when drug use is cut down or ceased	2	
		Intense cravings for drugs	3	
		Neglect the regular hobbies at leisure	4	
		Inability to control drug doses and drug use schedule	5	
		Drug use in spite of known damages	6	
		Other (please specify): …….	7	
		Do not know	77	
		Do not answer	99	
E3	What needs to be done to detect heroin use? SURVEYOR NOT ALLOWED TO SUGGEST ANSWER MULTIPLE-CHOICE QUESTION	Diagnosis should be based on the patient's history and clinical signs	1	
		Blood testing	2	
		Urine testing	3	
		Saliva testing	4	
		Other (please specify): ……)	5	
		Do not know	77	
		Do not answer	99	
E4	What are the main symptoms of heroin withdrawal syndrome? SURVEYOR NOT ALLOWED TO SUGGEST ANSWER MULTIPLE-CHOICE QUESTION	Continuous yawning	1	
		Dilated pupils	2	
		Nausea, vomiting, diarrhea	3	
		Tears, discharge from the nose, sweating	4	
		Body pain	5	
		Restlessness	6	
		Other (please specify .....……...)	7	
		Do not know	77	
		Do not answer	99	
E5	What are the causes of heroin withdrawal syndrome?	Ceasing of drug use	1	
		Sudden cutting down of drug dosage	2	
		Increase drug dosage	3	
		Other (please specify……)	4	
		Do not know	77	

		Do not answer	99	
E6	When is heroin withdrawal syndrome likely to start kicking in?	A few hours after the last use of heroin 1-2 weeks after the last use of heroin More than 2 weeks from the last use of heroin Other (please specify ....……..) Do not know Do not answer	1 2 3 4 77 99	
Knowledge of and attitude towards Methadone therapy				
E7	What do you know about methadone therapy?	Methadone therapy consists of replacing heroin by another opioid drug with lesser HIV and other social risks Methadone therapy means treating heroin addiction by methadone Methadone therapy is a drug addiction treatment in Vietnam Other (please specify) …… Never heard anything about methadone therapy Do not know Do not answer	1 2 3 4 5 77 99	 → **F1** → **F1** → **F1**
E8	What are the benefits of methadone replacement therapy? SURVEYOR NOT ALLOWED TO SUGGEST ANSWER MULTIPLE-CHOICE QUESTION	Reduce drug use and addiction Prevent HIV infection Patients have better quality of life Patients are better integrated into the community Reduce criminality Reduce drug-related mortality rate Other (please specify)…… Do not know Do not answer	1 2 3 4 5 6 7 77 99	

E9	What are the administration routes for methadone?	Per os Intra-muscular (IM) Intravenous (IV) Other (please specify): ……. Do not know Do not answer	1 2 3 4 77 99	
E10	Will you be willing to accept a new job in drug addiction treatment? THE SURVEYOR READS OUT THE OPTIONS	Very willing Willing Not sure Not willing Definitely unwilling Do not answer	1 2 3 4 5 99	
E11	Do you think it is necessary to incorporate methadone replacement therapy into the current training curriculum for medical students? THE SURVEYOR READS OUT THE OPTIONS	Absolutely necessary Necessary Not sure Not necessary Absolutely not necessary Do not answer	1 2 3 4 5 99	

F-KNOWLEDGE ABOUT PALLIATIVE CARE AND NUTRITION FOR PEOPLE LIVING WITH HIV

No	Question	Answer	Code	Transfer
F1	In your opinion, what does palliative care for AIDS patients consist of? SURVEYOR NOT ALLOWED TO SUGGEST ANSWER MULTIPLE-CHOICE QUESTION	A combination of various methods Improving patients' quality of life Early detection and prevention of pain Treatment of physical signs Counseling and support in managing psychological issues Counseling and support in managing social issues Loss compensation of the patient's family Other (please specify): ……. Do not know Do not answer	1 2 3 4 5 6 7 8 77 99	→ **F10** → **F10**
F2	What do you think are the main activities of palliative care? SURVEYOR NOT ALLOWED TO SUGGEST ANSWER MULTIPLE-CHOICE QUESTION	Assessment and treatment of symptoms (pain, discomfort, side effects, etc.) Mental health care (depression, anxiety, fear, etc.) Social support (isolation, poverty, unemployment, homelessness, discrimination) Spiritual support (beliefs, life values) End-of-life care Other (please specify) ……. Do not know Do not answer	1 2 3 4 5 6 77 99	
F3	In your opinion, when should palliative care for people living HIV be started?	Upon positive test result Only at the end-of-life stage From HIV infection diagnosis until after the patient's dead Other (please specify) …… Do not know Do not answer	1 2 3 4 77 99	
F4	How to determine the patient's pain level?	By determining the etiology of pain By examining physical signs By using the pain assessment scale (0-10) Do not know Do not answer	1 2 3 77 99	
F5	What are the determining factors in	Pain intensity	1	

	prescribing pain relief medication? SURVEYOR NOT ALLOWED TO SUGGEST ANSWER MULTIPLE-CHOICE QUESTION	Pain classification (nociceptive, neuropathic) 2 WHO's pain relief scale 3 Pain location 4 Pain characteristics 5 Other (please specify) …. 6 Do not know 77 Do not answer 99	
F6	Have you ever prescribed morphine as a pain relief?	Yes 1 No 2 Do not answer 99	
F7	What are the consequences of prolonged morphine treatment?	Morphine addiction 1 Psychological dependence to morphine 2 Physical dependence to morphine 3 Other (please specify)... 4 Do not know 77 Do not answer 99	
F8	How do you agree with the statement that "Depression is a common sign found in HIV patients/people living with HIV"? THE SURVEYOR READS OUT THE OPTIONS	Strongly agree 1 Agree 2 Unsure 3 Disagree 4 Strongly disagree 5 Do not answer 99	
F9	What do you think are the main benefits of palliative care? SURVEYOR NOT ALLOWED TO SUGGEST ANSWER MULTIPLE-CHOICE QUESTION	Purely pain relief 1 Improve quality of life 2 Enhance treatment adherence 3 Reduce healthcare costs for the family 4 Reduce treatment costs for the medical system 5 Other (please specify): ……. 6 Do not know 77 Do not answer 99	
F10	Do you think it is necessary to train medical students on palliative care? THE SURVEYOR READS OUT THE OPTIONS	Absolutely necessary 1 Necessary 2 Unsure 3 Not necessary 4 Absolutely unnecessary 5 Do not answer 99	
F11	What are the benefits of a healthy diet for people living with HIV? SURVEYOR NOT ALLOWED TO SUGGEST ANSWER MULTIPLE-CHOICE QUESTION	Prevent weight loss 1 Prevent malnutrition 2 Reduce infection risks 3 Enhance treatment efficiency 4 Other (please specify)..... 5 Do not know 77 Do not answer 99	
F12	Why do people living with HIV have an increased need for nutrition? SURVEYOR NOT ALLOWED TO SUGGEST ANSWER MULTIPLE-CHOICE QUESTION	Increased body needs for nutrition 1 Increased need to fight the diseases 2 Other (please specify): ..... 3 Do not know 77 Do not answer 99	
F13	What are the food groups people living with HIV have an increased need for?	Cereals (rice, potatoes, corn, etc.) 1 Food with animal origins (meat, fish, shrimps, crabs) 2 Milk and dairy products 3 Fats and oils (oils, fats, sesame, peanuts) 4	

	SURVEYOR NOT ALLOWED TO SUGGEST ANSWER MULTIPLE-CHOICE QUESTION	Vegetables and fruits 5 Drink a lot of water 6 Other (please specify)..... 7 Do not know 77 Do not answer 99	

Many thanks for your cooperation.

QUESTIONNAIRE 2: OPINIONS ON DRUGS AND HIV TREATMENT
TO BE FILLED OUT BY RESPONDENTS

Code ☐☐☐☐☐

Dear Colleague,
In this section we would like to know about your attitude towards HIV/AIDS and drug use issues. For each of the questions below, please circle your corresponding answer.

Many thanks for your cooperation.

	Statement	Strongly disagree	Disagree	Unsure	Agree	Strongly disagree	Don't know
G1	Drug use/addiction is genetic and/or happens only to people with a weak personality	1	2	3	4	5	
G2	Parents should be responsible for their children's drug use/addiction	1	2	3	4	5	
G3	Free-of-charge drug addiction treatment is a good investment from the government	1	2	3	4	5	
G4	Drug users should be jailed/sent to rehab to keep the community safe	1	2	3	4	5	
G5	If I had the choice, I wouldn't want to have anything to do with drug users, including giving them medical treatment	1	2	3	4	5	
G6	Drug users do not want to get HIV, neither do they want to give HIV to other people.	1	2	3	4	5	
G7	Compulsory concentration rehab is ineffective for injecting drug users	1	2	3	4	5	
G8	Free-of-charge methadone replacement therapy is a good investment from the government and international organizations to help drug users have a stable life.	1	2	3	4	5	
G9	Injecting drug users are unpredictable and dishonest when presenting at healthcare centers	1	2	3	4	5	
G10	Injecting drug users should not be regarded as criminals because drug addiction/dependency may be considered as a pathology/health issue	1	2	3	4	5	

H- COMMENTS ON HIV TREATMENT

HIV 1: Please read the following statements about your current job, and let us know how you agree with them: A: Strongly Agree; B: Agree; C: No Opinion; D: Disagree; E: Strongly Disagree; F: Do not answer							
	Statement	**A**	**B**	**C**	**D**	**E**	**F**
H1	HIV testing should be made compulsory for high-risk patients	1	2	3	4	5	99
H2	HIV testing should be made compulsory to all patients upon hospitalization	1	2	3	4	5	99
H3	HIV testing should be made compulsory to all patients before surgery	1	2	3	4	5	99
H4	HIV counseling is needed before HIV testing	1	2	3	4	5	99
H5	HIV counseling is needed after HIV testing	1	2	3	4	5	99
H6	Family members, as opposed to the patients themselves, should be the first people to whom the patients' HIV status should be disclosed.	1	2	3	4	5	99
H7	Family members, as opposed to the patients themselves, should be the first people to whom the patient's cancer diagnosis should be disclosed	1	2	3	4	5	99
H8	Healthcare workers should be allowed to disclose the patient's HIV status to their family	1	2	3	4	5	99
H9	Healthcare workers are allowed disclose the patient's HIV status to people other than the patient themselves or their family.	1	2	3	4	5	99
H10	HIV positive women would rather not have babies	1	2	3	4	5	99
H11	The patient should sign off a consent form before undergoing HIV testing	1	2	3	4	5	99
H12	If the patient refuses to sign the consent form before HIV testing, the clinician should have the final decision about whether or not the test should be carried out on the patient.	1	2	3	4	5	99
H13	HIV patients should be kept in areas that are isolated from the rest of the hospital.	1	2	3	4	5	99
H14	HIV patients should be kept in AIDS-specializing hospitals	1	2	3	4	5	99
H15	Healthcare workers should keep their contact with HIV patients to minimum	1	2	3	4	5	99
H16	A large number of health workers have been infected with HIV	1	2	3	4	5	99
H17	Regular HIV testing should be made compulsory by law to high-risk people.	1	2	3	4	5	99
H18	HIV testing should be made compulsory to foreigners coming to Vietnam as tourists or future residents to prove that they are HIV-free.	1	2	3	4	5	99
H19	HIV quarantine should be made compulsory by law to keep the community safe.	1	2	3	4	5	99
H20	The names of people living with HIV should be disclosed to the community so that everybody can avoid these patients	1	2	3	4	5	99
H21	People who get infected with HIV through sex or drug use deserve it.	1	2	3	4	5	99
H22	AIDS is a punishment inflicted on people with bad behaviors	1	2	3	4	5	99
H23	People with reckless sexual behaviors are the cause of AIDS	1	2	3	4	5	99
H24	People living with HIV have the right to get married	1	2	3	4	5	99
H25	Children living with HIV/AIDS should be allowed in school	1	2	3	4	5	99

H26	You wouldn't mind providing medical treatment/care for HIV/AIDS patients	1	2	3	4	5	99
H27	When tending to HIV/AIDS patients, you would give them the same quality of service as any other regular patients.	1	2	3	4	5	99
H28	If you were asked by a hospital's manager to provide clinical examination to a patient that you know has HIV, you would be willing to do that.	1	2	3	4	5	99
H29	You wouldn't want to tell your family and friends about you providing treatment and care for HIV patients.	1	2	3	4	5	99
H30	When working with HIV patients, you interact with them in the same way as you would interact with other patients.	1	2	3	4	5	99
H31	You feel embarrassed telling other people that you provide healthcare services to people living with HIV	1	2	3	4	5	99
H32	If you had to work with HIV patients, you would wish you could change your job so that you would never have to work with them.	1	2	3	4	5	99
H33	You feel afraid of people living with HIV	1	2	3	4	5	99
H34	You would feel ashamed if somebody you know had HIV	1	2	3	4	5	99
H35	You would feel ashamed if somebody in your family had HIV	1	2	3	4	5	99
H36	You would never buy food from a HIV-infected seller	1	2	3	4	5	99
H37	You would never share cutlery with a person living with HIV for fear of transmission	1	2	3	4	5	99

HIV 2			
Please read the following statements and let us know your own opinion: Strongly agree, agree, unsure/do not know, disagree, strongly disagree			
H38	*"Stigma is making a distinction against a person or a group of person"*	Strongly disagree 1 Agree 2 Unsure 3 Agree 4 Disagree 5 Do not answer 99	
H39	*"Discrimination usually means treating a person or a group of people less favorably than others"*	Strongly disagree 1 Agree 2 Unsure 3 Agree 4 Disagree 5 Do not answer 99	
H40	What are the signs of discrimination?	Avoidance: avoid touching, being near, sharing facilities 1 Denial: denied housing, job loss, denied healthcare services, etc. 2 Isolation: Isolated living area within the household, isolated	

	MULTIPLE CHOICE QUESTION	area in hospitals, etc. 3 Gossips and badmouthing from the community Gradual loss of status within the household and in the community 4 Loss of access to essential resources: housing, employment, healthcare, etc. 5 Other (please specify…) Do not know 6 Do not answer 7 77 99	
H41	What are the main causes of discrimination/stigma against people living with HIV? MULTIPLE CHOICE QUESTION	Lack of information and knowledge about HIV 1 Fear of HIV Connection of HIV/AIDS to 'social evils' 2 People with discriminatory behaviours are sometimes unaware of their own behaviours 3 Do not know 4 Do not answer 77 99	
H42	How does discrimination/stigma affect HIV-infected people? MULTIPLE CHOICE QUESTION	Self-discrimination 1 Job loss or inability to find employment 2 Difficulties in accessing healthcare and other social support services 3 Hiding HIV status (hence increasing HIV transmission risks) 4 Do not know Do not answer 77 99	

H43	How does discrimination/stigma affect HIV patients' family? MULTIPLE CHOICE QUESTION	HIV patients' family members lose opportunities and access to healthcare and other social support services 1 The patient's family income is affected due to limited employment and promotion opportunities HIV patient's family members also become victims of discrimination and stigma 2 Relationships within the households are affected Other (please specify: .....) 3 Do not know 5 Do not answer 77 99	
H44	How does discrimination/stigma affect the community/society? MULTIPLE CHOICE QUESTION	Discrimination/stigma increases HIV transmission risks within the community 1 Discrimination/stigma causes waste of resources because people living with HIV don't want to access intervention programs 2 Discrimination/stigma destroys traditional values (sense of belonging and mutual support within the community) Other (please specify: .....) 3 Do not know 4 Do not answer 77 99	
HIV3 *Please read the following statements and let us know what your stance is by choosing one of the following answers: Correct, Unsure, Incorrect, Do not answer*			
H45	You would behave differently if you knew that your colleague was HIV-positive/was a drug user/was gay	Incorrect 1 Unsure 2 Correct 3 Do not answer 99	
H46	You wouldn't mind performing intervention procedures on HIV/AIDS patients?	Incorrect 1 Unsure 2 Correct 3 Do not answer 99	

H47	You feel comfortable working with/assisting HIV-positive colleagues.	Completely comfortable 1 Comfortable 2 Unsure 3 No 4 Never 5	
H48	Providing healthcare and medical treatment for HIV patients will increase HIV infection risks for healthcare workers.	Incorrect 1 Unsure 2 Correct 3 Do not answer 99	
H49	Patients from high-risk groups (drug users, sex workers, gays, and people living with HIV) should be tested for HIV before accessing medical treatment.	Incorrect 1 Unsure 2 Correct 3 Do not answer 99	
HIV4			
H50	Over the past 6 months, have you ever seen a colleague deny treatment to somebody on the ground of knowing/suspecting that the person is HIV positive/is a drug user/is a sex worker?	Many times 1 A few times 2 Only once 3 Never 4 Do not answer 99	
H51	Over the past six months, have you ever seen a high-authority staff refer a patient to a lower-authority staff because the patient is HIV positive?	Many times 1 A few times 2 Only once 3 Never 4 Do not answer 99	
H52	Over the past 6 months have you ever seen healthcare workers disclosing HIV-positive status to the patient's family without their prior consent?	Many times 1 A few times 2 Only once 3 Never 4 Do not answer 99	
H53	Over the past 6 months have you ever seen healthcare workers gossip about patients' HIV status?	Many times 1 A few times 2 Only once 3 Never 4 Do not answer 99	

Many thanks for your cooperation.